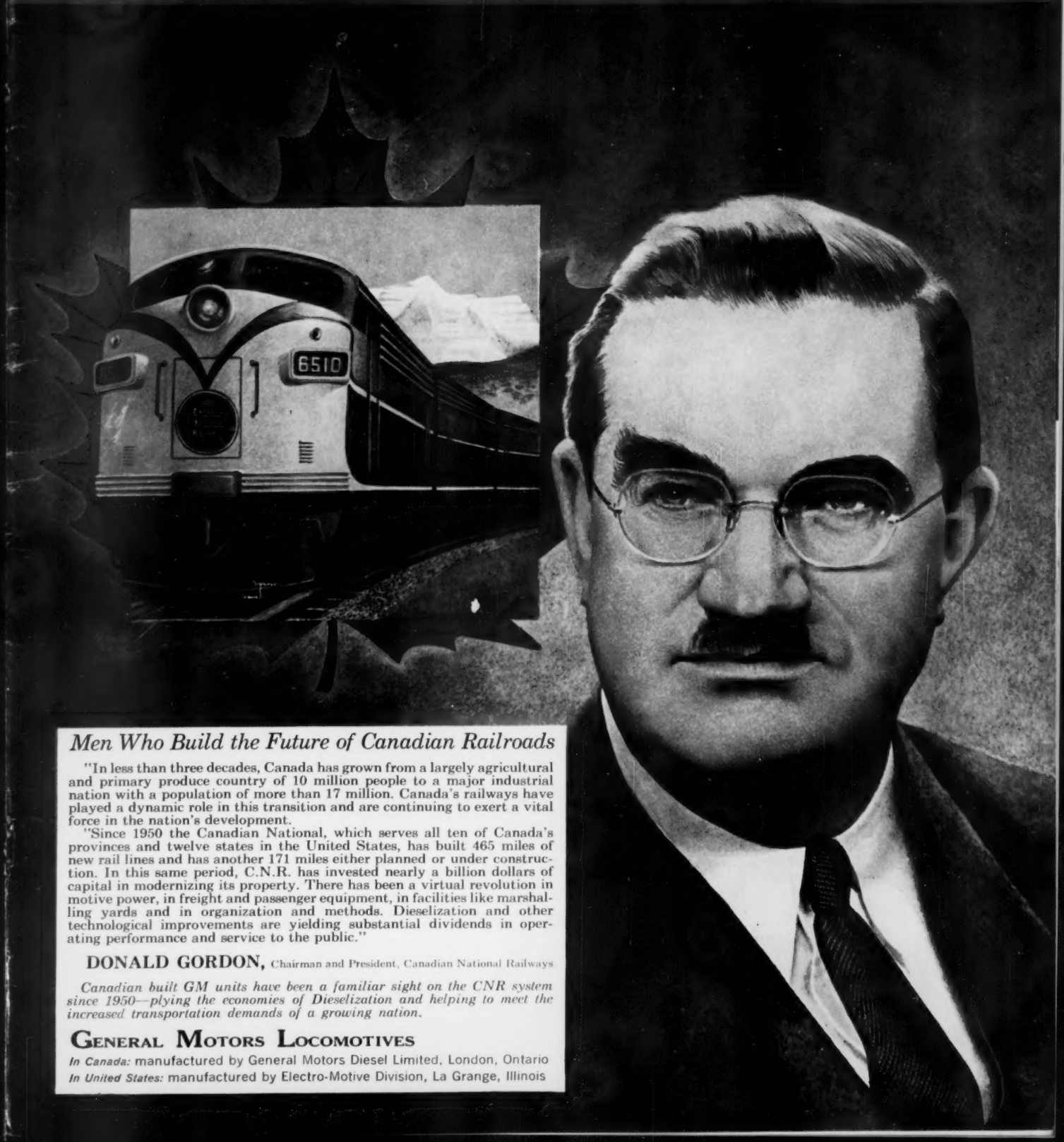
September 22, 1958

How 9 RRs Beat the Hot Box Menace

RAILWAY AGE *weekly*



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"Since 1950 the Canadian National, which serves all ten of Canada's provinces and twelve states in the United States, has built 465 miles of new rail lines and has another 171 miles either planned or under construction. In this same period, C.N.R. has invested nearly a billion dollars of capital in modernizing its property. There has been a virtual revolution in motive power, in freight and passenger equipment, in facilities like marshalling yards and in organization and methods. Dieselization and other technological improvements are yielding substantial dividends in operating performance and service to the public."

DONALD GORDON, Chairman and President, Canadian National Railways

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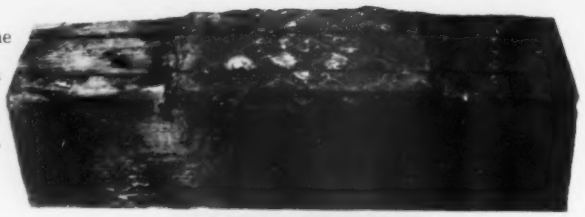
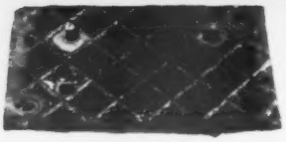
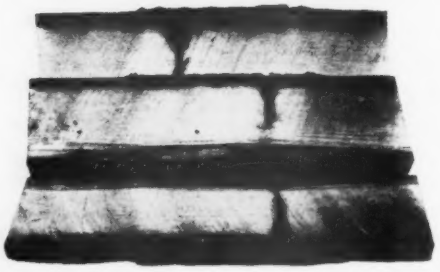
These unretouched photographs of a bridge tie dramatically illustrate the underplate protection afforded by Bird Self-Sealing Tie Pads. Life of the *preceding* deck on this bridge at Akron, Ohio, was 19 years. When the deck was replaced in 1948, Bird Self-Sealing Tie Pads were installed. The sound condition of the ties today, after 10 years, indicates *at least* a 50% increase in their life expectancy beyond that previously obtained without the protection of Bird Self-Sealing Tie Pads. Write for interesting booklet to Bird Tie Pads, East Walpole, Massachusetts, Department HRA-9.

Pattern Bottom Plate: This is the same tie, halved and slabbed. Note imprint of pattern bottom tie plate on the pad. *Bird Self-Sealing Tie Pads give the same rugged, lasting service when used with either pattern-bottom or smooth-bottom tie plates.*





Under-Plate Protection: Slabbed sections of the halved tie show the excellent condition of under-plate and spike hole wood after 10 years' protection by Bird Self-Sealing Tie Pads.



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The FR-19 Gear, like all Miner gears, is fully enclosed and self-contained, giving the rubber pads protection against foreign material, and aiding in an easy application within the standard yoke and to the car at any shop or rip track.

Sectional View

W. H. MINER, INC. CHICAGO

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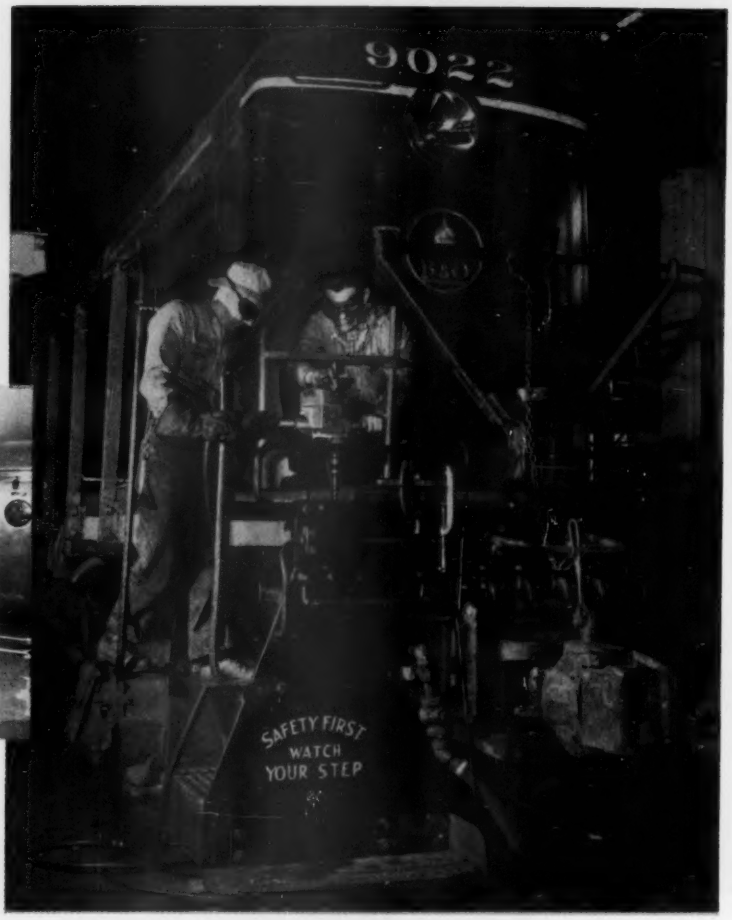

that's why the
Baltimore & Ohio
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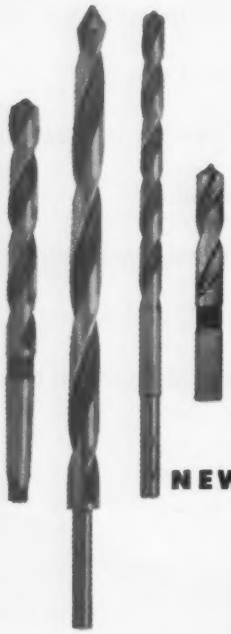
Norfolk and Western
and many others count on

NEW YORK TWIST DRILLS

for maintenance, installation and construction requiring clean concentric holes without burrs



Special New York twist drills for railroad work include Bonding, Prentice, Tie-Boring and Taper Shank drills (with or without use-em-up slabs). In addition there is a full range of standard drills in every length and diameter.

In locomotives, cars, shops and America's vast network of tracks the economical drilling of holes in all types of metals is essential. That's why more and more railroads turn to NEW YORK twist drills. They bite faster, cut cleaner and produce more holes per drill.

The pictures shown here, taken at B & O's Mt. Clare shops are typical of scenes in plants all over the country where NEW YORK drills are preferred because they do a top job *with cost savings of at least 20%*.

NEW YORK produces a full line of industrial quality high speed twist drills to solve any production or maintenance problem. Why not send us your specifications — We'll be glad to make recommendations.

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RAILWAY AGE *weekly* September 22, 1958 • Vol. 145, No. 12

Week at a Glance

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Passenger picture: It's gloomy ..... p. 9

ICC examiner's report holds little hope for the future of rail passenger service. Year-long investigation produced this appraisal of the passenger deficit: It's real and serious.

Better service and cost control p.10

These twin points were interwoven in most discussions at the Coordinated Mechanical Associations' annual meeting in Chicago. Another theme given emphasis: the need for greater coordination and teamwork between various railroad departments.

Four-in-one package for maintenance work p.13

Machines for doing most of the essential track-maintenance operations have been packaged into a single outfit. The unit will renew ties; raise, surface and line track; pull and drive spikes; run up and tighten bolts; and drill bolt holes in rails.

This washer gets all cars—high or low p.14

The Washington Terminal, collaborating with Whiting Corporation engineers, has come up with a new-design car washer. It features roof and eave brushes which can be raised and lowered to handle cars of any height.

M/W men increase RR net income p.23

Mechanization of maintenance work, and the savings it has produced, were major themes at last week's conventions of the Roadmasters' and Bridge & Building associations.

How 9 railroads beat the hot box menace p.25

Automatic, accurate—and economical—detection of overheated journals is used by the nine railroads to minimize costly delays to freight trains. Here's a report on how the detectors work and why the future seems bright for automatic hot box detection.

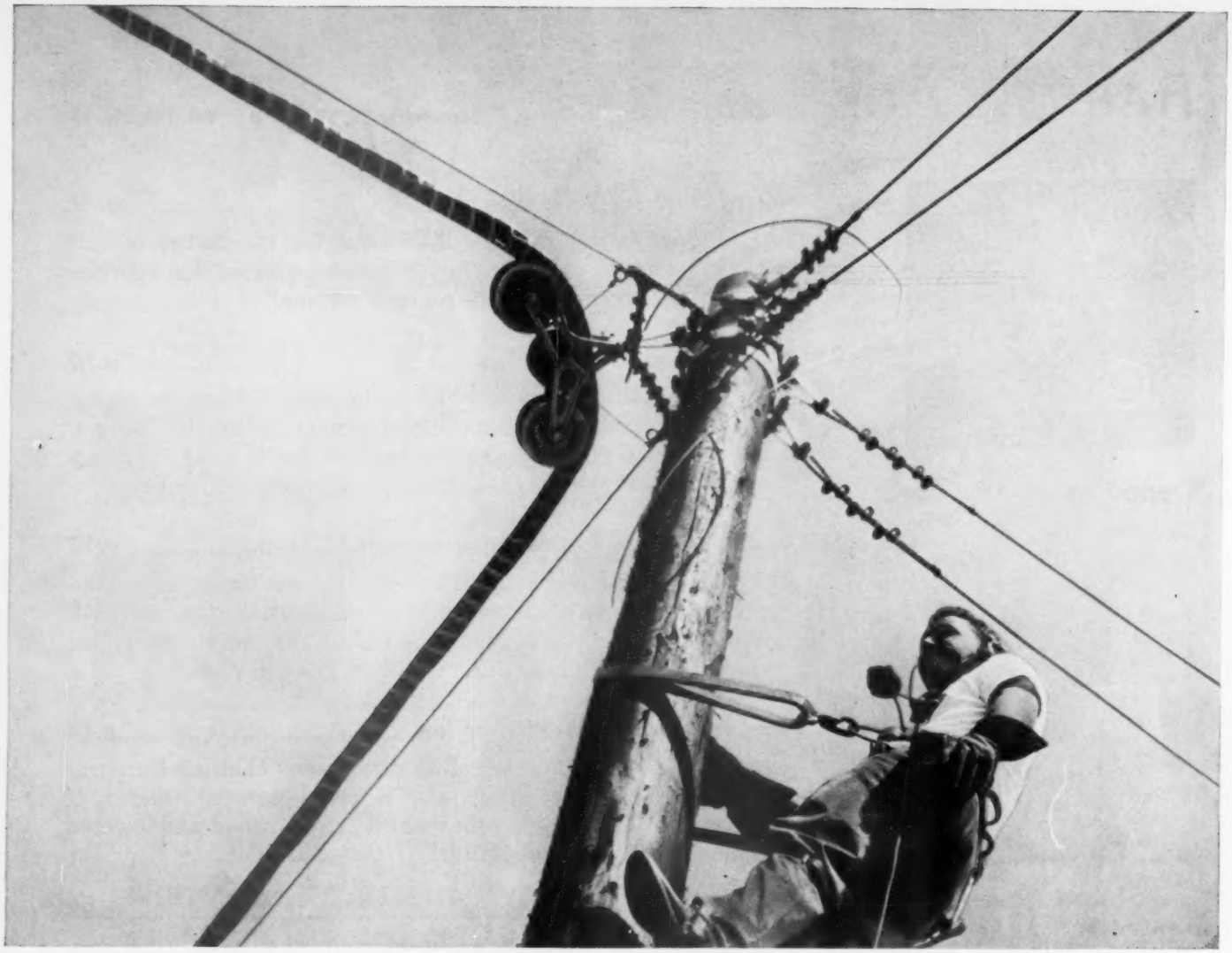
The Action Page—Make no small plans! p.42

Railroads still face the need to re-establish their rights to equality with other corporate industry. Two courses of action are urgent: Railroads must use vigorously all the liberty the 1958 Transportation Act allows them, and they must carefully formulate and publicize the further minimum legislative program necessary to restore railroad credit and growth potential.

Short and Significant

A uniform 'fringe benefit' move . . .

has been launched by all standard railway labor organizations except the Engineers and Conductors. Demands were served



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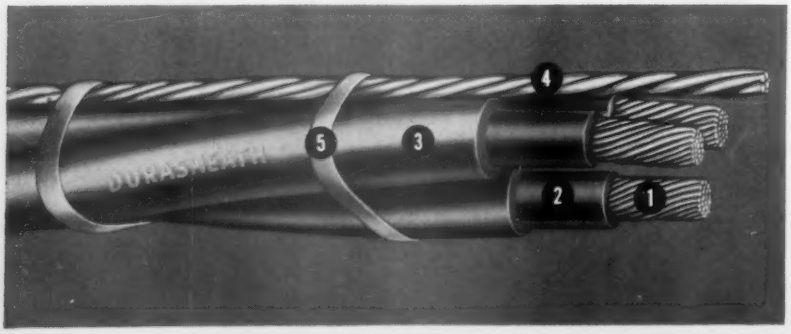

1. Conductors—copper or aluminum
2. Ozone-, moisture- and heat-resistant butyl insulation
3. Neoprene weather-resistant jacket
4. Messenger
5. Binder tape

Week at a Glance CONT.

Current Statistics

Operating revenues, seven months	
1958	$5,328,904,917
1957	6,115,399,181
Operating expenses, seven months	
1958	4,352,973,447
1957	4,812,497,958
Taxes, seven months	
1958	502,862,761
1957	627,828,840
Net railway operating income, seven months	
1958	299,720,126
1957	519,061,429
Net income estimated seven months	
1958	200,000,000
1957	397,000,000
Average price 20 railroad stocks	
Sept. 16, 1958	90.96
Sept. 17, 1957	95.74
Carloadings revenue freight	
Thirty-six wks., 1958	20,146,021
Thirty-six wks., 1957	24,930,891
Average daily freight car surplus	
Wk. ended Sept. 13, 1958	36,558
Wk. ended Sept. 14, 1957	20,710
Average daily freight car shortage	
Wk. ended Sept. 13, 1958	2,418
Wk. ended Sept. 14, 1957	1,831
Freight cars on order	
August 1, 1958	25,994
August 1, 1957	85,229
Freight cars delivered	
Seven months, 1958	31,658
Seven months, 1957	59,136

•

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Sept. 10 on most roads, proposing a revised time limit rule on grievances, establishment of new rules governing hiring, new conditions of safety and sanitation, and a supplemental program of accident benefits. It's an interim movement which the unions reportedly want to have out of the way by next year, when the wage-rule change moratorium expires.

GM's new high-horsepower locomotive . . .

currently is demonstrating on the DM&IR. Essentially an SD-9 with a turbosupercharger which boosts horsepower to 2,400, the locomotive is designated SD-24. It has all-electric controls, including a new 16-stage transition.

Eastern railroads . . .

may not accept the urgently sought handling charge on import and export freight, which the ICC accorded them—and which would net them about $10,000,000. Inter-port rivalry has introduced complications.

PRR-Santa Fe purchase of TP&W . . .

has been approved again, this time by a three-man Federal court in Minneapolis. The court unanimously refused to issue an injunction, sought by M&StL, to block the sale. Pennsy and Santa Fe already had ICC approval of the deal. Next (and last) step for M&StL, if it hopes to halt the sale: the U.S. Supreme Court.

Freight forwarder volume rates . . .

remain suspended under an ICC order issued last week. Acting as an appellate division, the ICC's Division 2 denied petitions to lift its suspension, which extends to March 12, 1959. The suspended rates involve so-called Plan 3 piggyback—under which shippers (including forwarders) would furnish their own t-o-f-c equipment. Motor carriers protested the rates, contending they would constitute an invasion of the trucking field. A hearing will be held Oct. 1 (RA, Sept. 15, p. 10).

General Motors' Aerotrain . . .

is back in revenue service, this time on the Rock Island in suburban operation. Test runs scheduled to start Sept. 22, according to RI President D. B. Jenks, "may result in the ultimate purchase" of the two lightweight trains. It's Rock Island's second venture with lightweights in commuter operations.

Pennsylvania and seven southern roads . . .

are engaged in discussions which could result in discontinuance of through sleeping car service between New York and the South through the Washington gateway. Pennsy's contention: It's not getting a fair share of the revenue; it gets the short haul with part loads, while the southern lines get the long haul with more nearly full loads. Discussions are involving RF&P, ACL, SAL, FEC, Southern, C&O and N&W.

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Passenger Picture: It's Gloomy

ICC examiner's report holds little hope for the future of rail passenger service. Year-long investigation produced this appraisal of the passenger deficit: It's real and serious. Optimism doesn't seem justified.

In another decade the railroad passenger coach "may take its place in the transportation museum along with the stagecoach, the side-wheeler, and the steam locomotive."

That was the gloomy prediction last week of an ICC examiner's report climaxing a year-long inquiry into the railroad passenger service deficit.

Examiner Howard Hosmer's warning was couched in blunt terms:

"If railroad passenger-miles (other than in commutation) continue to decline at the average rate of reduction between 1947 and 1957, the parlor and sleeping-car service will have disappeared by 1965 and the coach service by 1970."

He could see little hope that any intervening development could halt the passenger train's headlong journey into oblivion.

The examiner made no suggestions for any ICC steps to halt the trend—but, he warned, "unless the passenger deficit is eliminated or greatly reduced in the near future, the ability of the railroads to transport freight efficiently and economically is certain to be seriously impaired."

The only answer, he indicated, seems to be a continuing reduction in passenger train operation—because "none of the suggested means of reducing the deficit, such as revision of labor agreements, lower taxes, discontinuance of subsidies for motor and air transportation, and more revenue from mail can be considered promising."

Mr. Hosmer blamed the deficit on "the tremendous inflation in railroad operating costs" since World War II and the continuing decline in revenues. He agreed that the railroads had good reason to believe that the principal underlying cause of their loss of passenger traffic has been government promotion of air and highway transportation.

His report mentioned the possibility of similar public aids to the railroads but said that "the railroads are defenseless against the tax assessors who seemingly are bent on killing the goose that lays the golden egg."

The report denied emphatically that the passenger service deficit is a bookkeeping phantom. That had been the contention of some witnesses who claimed that the ICC formula for apportioning expenses between freight and passenger service is unrealistic.

Even if only "solely-related" passenger costs are taken into account, the examiner said, the deficit still is staggering —currently about $140,000,000 a year.

"The passenger deficit," he concluded, "is not something which can be conjured away by statistical legerdemain. It is real and serious."

Mr. Hosmer said the ICC inquiry had uncovered little of the optimism about the future of railroad passenger service that sometimes makes newspaper headlines.

"Railroad presidents occasionally are quoted as saying publicly that their companies are not going out of the passenger business, which they are hopeful of continuing without an out-of-pocket loss," he said. "But those executives did not testify in this proceeding nor send subordinate officials to make rosy predictions."

Mr. Hosmer chided critics who "accuse the railroad executives of wanting to get rid of their passenger business regardless of its profitability . . ."

He asserted:

"The evidence here supports the conclusion that the railroads generally have not discontinued trains without serious efforts — sometimes prolonged — to make them pay and only after sympathetic consideration of public convenience. The officials and employees of the railroads have a traditional pride in their long record as passenger carriers, and there is no reason to believe that profitable passenger operations have been abandoned."

The examiner was doubtful that improved equipment and service could make a dent in the deficit, declaring that after spending half a billion dollars on new passenger equipment between 1947 and 1956 "the railroads cannot be justly charged with undue conservatism in modernizing their passenger facilities."

He went on to say:

"If railroad passenger service can be said to have any future, some bits of evidence here point to operations between the largest centers of population for distances from 100 to 900 miles using non-luxury equipment perhaps including cars such as the Slumbercoach." But this, he conceded, was only a "speculative guess."

He took note of the generally unfruitful efforts of railroads to win back passengers with new lightweight equipment. Further experiments, he added, "would be questionable in view of the contracting share of the travel market available to the railroads today."

The railroads' share of the market will continue to diminish, he predicted, particularly in view of the oncoming "jet" age. "Almost the only advantage which railroad passenger service now has to offer in competition with motor and air travel," he said, "is an incomparably better safety record. This factor is of negligible value . . ."

His concluding point:

"Finally, if it be true that the prefer-

(Continued on page 22)

Four-Track Shoo-Fly

For the next two years, commuters on Chicago & North Western's Galena Division will ride over this 1,500-ft steel and timber trestle to bypass construction work on Chicago's Northwest Expressway. This four-track shoo-fly, north of the mainline, is the longest bypass required thus far to minimize train service interruptions in connection with metropolitan highway construction in the area. North Western has 17 major intersections with new super-highways, but only those that take the roadway under the tracks require rail detours.

Better Service and Cost Control

That is the underlying theme of the Coordinated Mechanical Associations annual meeting in Chicago. Need for greater inter-departmental coordination on railroads is also stressed.

"Our patrons are brutal and demanding judges," E. E. Foulks, assistant vice president—Rock Island, told the annual meeting of the Car Department Officers Association last Monday. "They will give us the opportunity to transport their goods only when we are able to furnish them a highly satisfactory service at a reasonable cost."

The general themes of better service and control of costs pervaded most of the discussions held by the four mechanical associations at their annual meetings in Chicago last week. In addition to the CDOA, the Air Brake Association, the Locomotive Maintenance Officers Association, and the Railway Fuel and Operating Officers Association held sessions at the Hotel Sherman on September 15, 16 and 17.

Mr. Foulks called for greater coordination and teamwork with less competition between the various departments of railroads. "Our real boss (the shipper) is not interested in any interdepartmental quibblings," he said, "but judges us on the overall movement of his goods . . . We cannot feel that legislative action has solved our problems for there is still much to be done to hold the traffic we are presently handling and recapture some of that lost to other forms of transportation."

The Transportation Act of 1958 and legislative challenges ahead were discussed by L. W. Horning, vice president—New York Central, at the Tuesday session of the Railway Fuel and Operating Officers Association. "The great danger of the moment," he warned, "is that people generally will now believe that since Congress enacted the Transportation Act of 1958, the problems of the railroads are solved." This is not the case and the act does not include "a single dollar of subsidies" or "a dime of tax relief."

"Government relations, like public relations, is the job of every railroad man and woman," Mr. Horning said. "The AAR and state railroad associations need help. The most effective help can come from railroad officials at the local level—from railroad officials who know their legislators at all levels and grasp every opportunity to discuss our problems with them."

"To some, 'politics' and 'politicians' have bad connotations," Mr. Horning continued. "It should not be so. We must learn to play the game of politics . . . We must support those who will fight for the right regardless of political consequences, and we must demonstrate to them that it pays to do so."

Another NYC vice president, Douglass Campbell of Chicago, told the RFOOA that public relations are now more important than at any other time in railroad history. He said that railroads are now almost entirely dependent on public opinion—and they have not done an effective job of selling themselves to their communities. Mr. Campbell referred to the Transportation Act of 1958 and said that its passage was entirely the result of

(Continued on page 21)

Watching Washington *with Walter Taft*

Mr. Taft is on vacation. During his absence, this column is being written by other members of the staff.

• **CHANCES ARE SLIM** that any part of the 1958 Transportation Act will be declared unconstitutional. That's the opinion of legal experts who have been closely following developments in New Jersey, where the constitutionality of the interstate service abandonments provision of the new law has been attacked (RA, Sept. 8, p. 9; Sept. 15, p. 9).

PROPOSED DISCONTINUANCE of Hudson River ferry service by the New York Central and the Erie touched off the legal battle in New Jersey. So far, state authorities have won a federal court injunction preventing stoppage of the ferries—pending a hearing on the state's petition to upset that part of the new Act which broadens the ICC's authority over interstate service abandonments. The hearing may come within the next two weeks.

TO UPSET THE LAW, New Jersey will have to establish a violation of the rights of New Jersey citizens under the Fifth (due process) Amendment. This, according to the experts, will be hard to prove. A more likely possibility, they say, would be a court finding that the ICC had abused its discretion in not holding a final hearing on the ferry discontinuances.

THE RAILROADS CONTEND that the ICC already had ample evidence, from previous hearings, on which to base its decision not to interfere with the discontinuances. Another costly delay in taking off the ferries could be the result of any new hearing.

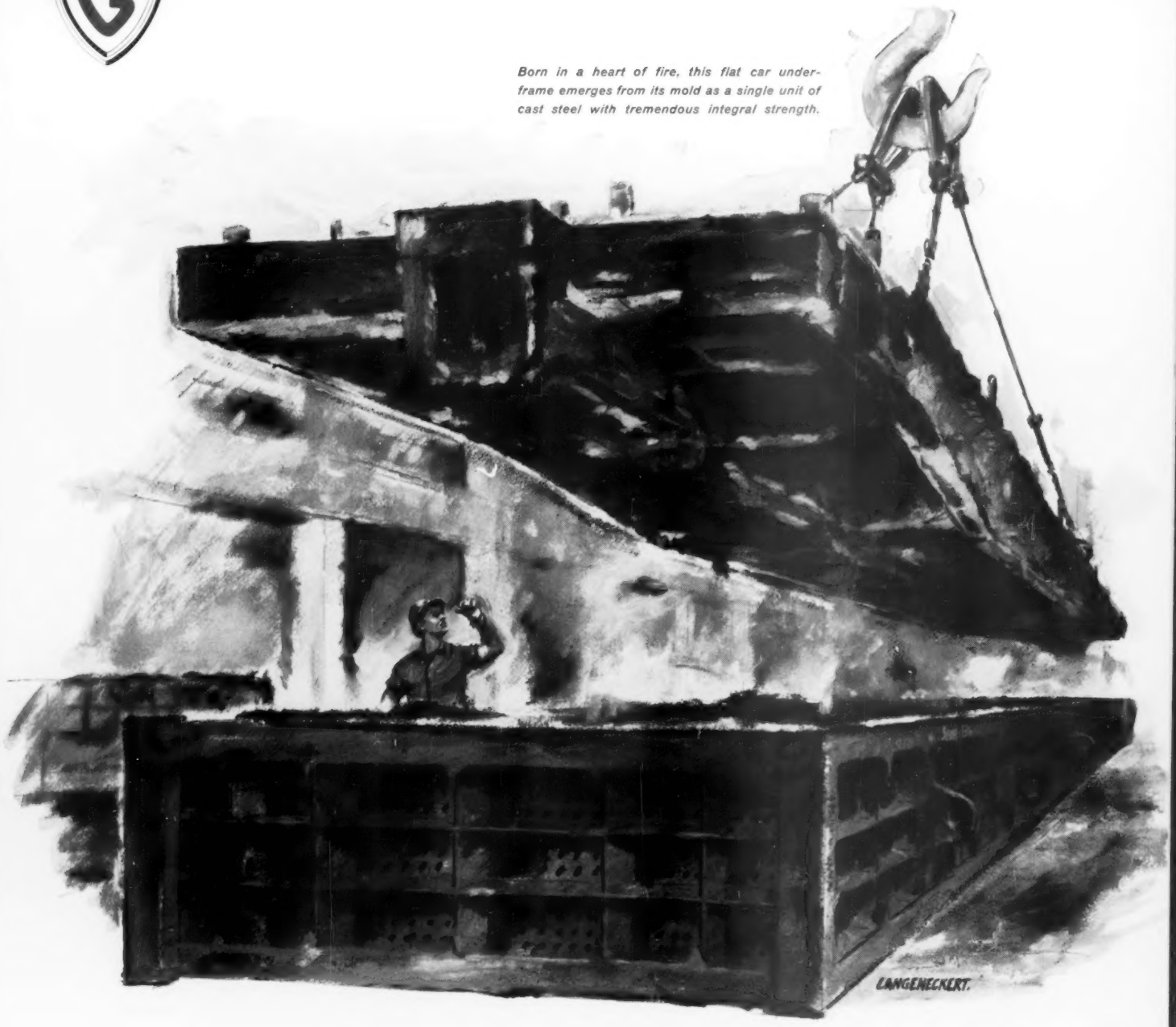
WHAT WILL HAPPEN to the rest of the act if the court does the unexpected and finds the interstate service abandonments provision unconstitutional, is a question currently making the rounds. Best opinion is that the other major provisions of the act (including government-guaranteed rail loans) won't be affected at all by the New Jersey action, since they are unrelated to the disputed provision.

• **ICC WITNESSES** may be called to testify this week before the Legislative Oversight Subcommittee of the House Interstate and Foreign Commerce Committee. The subcommittee opened two weeks of hearings last Tuesday, hoped to call ICC, FCC and CAB witnesses after winding up its SEC inquiry.

• **NEW CONCERN** is evident among some railroad officers as they analyze role of forthcoming transportation study group in the Senate. Group will have wide latitude in its studies; and pending their completion Congress may move slowly on any new legislation roads may seek in 1959.

Where railroad progress is cast in steel....

Born in a heart of fire, this flat car underframe emerges from its mold as a single unit of cast steel with tremendous integral strength.



Flat car with one-piece cast steel underframe. These underframes provide greatest strength at minimum weight, greater availability, lowest maintenance cost.

Over half a century ago, General Steel began with a big idea that promised equally big benefits to railroads—the combining of many separate parts into a rugged one-piece steel casting.

From the great strength and durability of these castings came longer life for railroad equipment, lower upkeep cost and increased operating safety.

General Steel, together with railroads and other industries using Commonwealth Products, has become bigger and better through the years. Together they set the standard today for progress and service . . . through outstanding performance.

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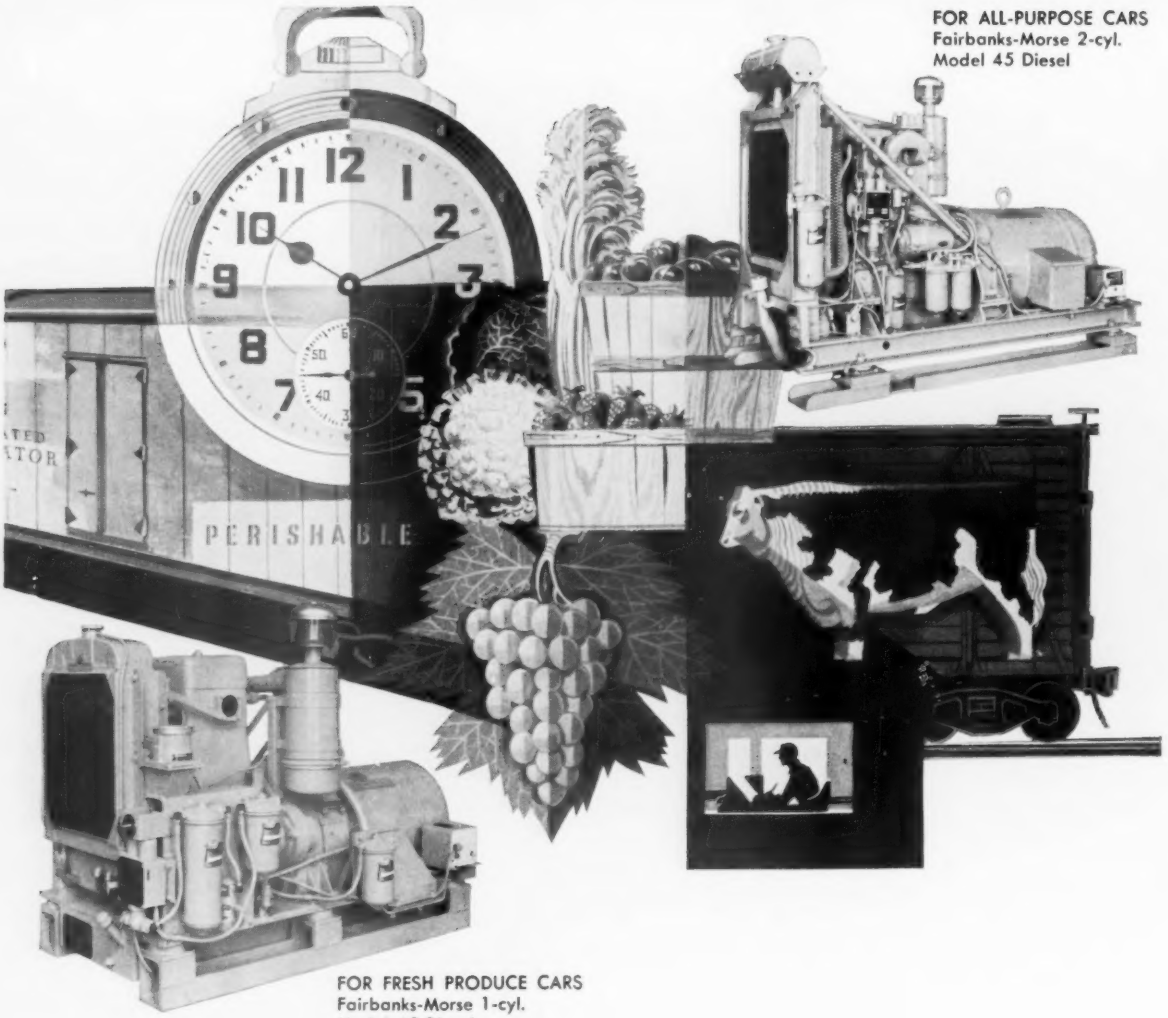

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DIESEL LOCOMOTIVES AND ENGINES • ELECTRIC MOTORS • GENERATORS • PUMPS • COMPRESSORS • SCALES • WATER SERVICE EQUIPMENT

MULTI-GANG package unit (above), combines machines for doing all the most essential track-maintenance work.

The Four-in-One 'Package'

Machines for carrying out most of the essential track-maintenance operations have now been packaged into a single outfit.

Designated as the Multi-gang Package Unit, and placed on the market by Tamper, Ltd., of Montreal, this equipment will renew ties, raise, surface and line track, pull and drive spikes, run up and tighten bolts, and drill bolt holes in rails. Four hydraulically operated machines are in the "package"—the Main Car, Hydrillbolter, Spike Hydrejector-Tie Hydrenewer, and Comboliner.

A production tamping machine is incorporated in the Main Car. The unit has a split crosshead, each side of which works independently of the other. The machine has a powered downfeed to "nip up" dangling crossties. According to its builders, the machine will tamp up to 600 ft of track an hour.

The Main Car doubles as a transport unit for as many as 13 men as well as for other machines in the "package." The three smaller units can be rolled up or down a hydraulic tail rack between the Main Car's deck and the rails.

Powered by a 30-hp air-cooled gasoline engine, the Main Car is hydraulically propelled at speeds up to 25 mph. It has three operating controls—one for each tamping head and one for propulsion and braking of the car. The unit will remove itself from the track, together with loaded machines, at almost any location. This is done with two crawler tracks mounted transversely under the unit. With these it can be steered like a conventiontal bulldozer.

The Hydrillbolter is a combination rail drill and bolting machine. The bolter has a single-control lever. This unit, operated by one man, features an automatic change from high-speed low-torque for running nuts to low-speed high-torque for nut tightening. It will handle nuts on either side of both rails. The drill attachment, adaptable in 2 min. time, will drill a 1⅛-in diameter hole in 1½ min. The unit can be removed from the rails by two men.

The Hydrejector-Hydrenewer, a combination spike puller and tie renewer, will pull from 20 to 25 spikes per minute and has a transverse carriage to speed the movement from one rail to the other. Control is by a single lever. As a tie renewer, the unit is designed to renew 15 to 20 ties an hour. Powered by a 9-hp gasoline engine, the machine hydraulically forces ties from beneath rails without, it is said, disturbing the track. Eight strokes are required to remove or insert a tie. The unit is equipped with handles and set-off wheels so one man can remove it from the rails.

The Comboliner combines a powered jack and a track liner. It has rail dogs which automatically engage the rails, and a hydraulically operated foot plate which lowers onto the tie crib. A vertical hydraulic ram at each end of the foot plate effects the track raise. A cross-level indicator, reading in inches, assists the operator in positioning rails horizontally. The foot plate also contains a double-acting hydraulic cylinder for lining purposes. When lining track, the operator inserts two lining anchors in the crib and operates the foot-plate ram, which exerts up to 10,000 lbs of thrust in the desired direction. The unit is also equipped with retractable set-off handles and wheels, as well as a turntable for turning the set-off wheels to the desired side of the track.

'Bookend' Bulkhead

New design being service tested on two railroads

ADJUSTABLE BULKHEADS for flat cars support the lading firmly.

The adjustable "bookend" bulkhead for flat cars, first built and tested two years ago (RA, Aug. 13, 1956, p. 35), has now been strengthened and is undergoing service testing on two railroads.

Several changes have been made in the original design. The moveable bulkhead now has two horizontal instead of three vertical panels of Metalclad plywood. A 12-in reinforcement channel shelf at top provides rigid support for the telescoping diagonal braces, the ends of which lock tightly in stake pockets. At the bottom, a 10-in moveable channel locks in place on each side to a horizontal box-section weldment which can be freely positioned and anchored in stake pockets.

The bulkhead (10 ft wide, 8 ft high) is held in place also by pins through gussets welded to the top and bottom channels.

The present design, as before, allows bulkheads to be placed flush with lading to eliminate dunnage. Weight of the assembly is 1,600 lb. Rectangular holes in bulkhead permit positioning with a fork lift truck as well as application or removal from car if desired.

This Washer Gets All Cars—High

Five roads schedule passenger trains in and out of the Washington Terminal at Washington, D.C. Before incoming trains again take to the road, the interiors of the equipment are cleaned and the exteriors washed.

The WT was washing the exteriors by hand. It noted that many roads reported making savings by doing this work with a mechanical washer. These savings were being reported even by roads with fewer cars to wash than the WT. With an average of 250 cars to be cleaned daily, the terminal felt that it could make substantial savings by doing this work with a mechanical washer. However, there was one difficulty. There was no mechanical washing equipment available to meet the unusual needs of this terminal.

Because it serves several roads, various types of passenger equipment come to this station. Some are conventional cars 13½ ft high. Others are dome cars as high as 15½ ft. Still others are Budd cars with stainless-steel sides and tops 11½ ft high. A mechanical washer to clean this equipment had to be flexible enough to adjust to any roof height from car to car on a train.

Collaborating with engineers of the Whiting Corporation, the Washington Terminal came up with a new design of train washer. It features roof and eave brushes which can be raised and lowered by an operator to adjust to any car-roof height.

Instead of being at one side, the operator is in an elevated control house which straddles the track. The control house is above the eave and roof brushes. Both the inbound and outbound sides of it are of sloping glass panels. The operator can observe conditions along the roof and at each side of the train. A control panel, having nine air-control valves and 36 individual pushbuttons, all suitably labeled, simplifies operation of the plant. The operator can apply or withhold water or solution at any "station" along the washing platform.

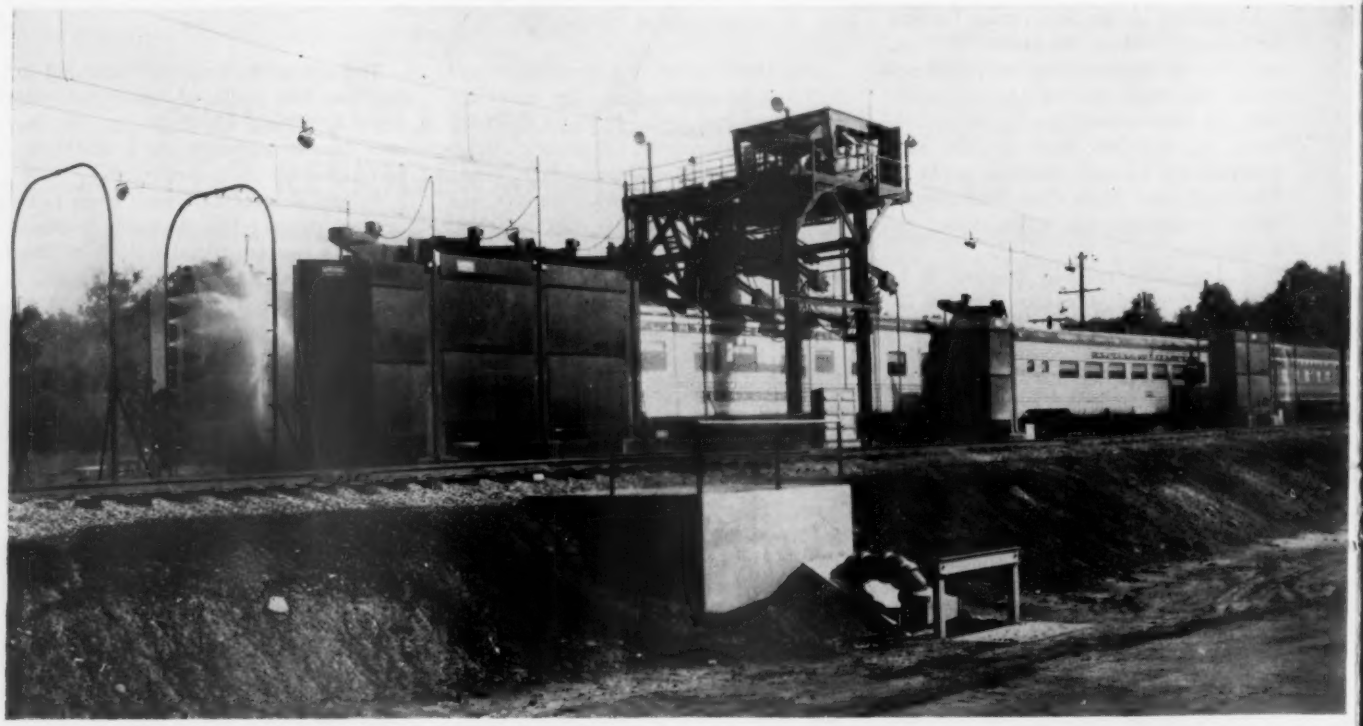
The new train washer is a single-track one-direction facility which washes car roofs, eaves, sides, trucks and wheels. The concrete washing platform is 23 ft wide and 218 ft long. The washer has six pairs of side brushes, one pair of roof brushes, one pair of eave brushes, five arch-type sprayers and three truck-and-wheel sprayers. Trains move through the plant at a speed of 70 ft per min.

The first "station" which a car reaches when entering the plant is an arch-type prewetter. This directs sprays of water onto the sides and tops of the cars. Primary purpose of this station is to prepare the surfaces to receive and spread the cleansing solution. It also seals all voids against acid penetration. In addition, it tends to warm the surfaces in cold weather and to cool them in hot weather.

The next station is an arch-type cleansing-solution applicator. This is arranged so the solution can be applied to only the sides of a car, to the roof only, or to both sides and roof. The cleansing solution contains acid for loosening and cutting dirt from the surfaces.

Immediately after station No. 2 is a truck-and-wheel solution sprayer. The sprayer is a combination of horizontal and vertical pipes having nozzles for spraying an alkaline solution onto the outer surfaces of the trucks and underframes and on both sides of both wheels. The solution cuts the grease and neutralizes acid effluents from lavatories and toilets.

The car then passes two vertical pairs



WASHINGTON TERMINAL cleans up to 250 passenger cars daily. To do so economically, mechanical washing equipment was installed. Here a string of passenger cars is passing through the washer. Lead car (left), is entering final washing station.

or Low

of side brushes. The first, rotating in the direction of car travel, extends up the full height of the car side. The second brush, rotating against the direction of travel, is shorter and is for cleaning the car windows. Both brushes not only scrub the surfaces but keep them wet with the acid solution for further loosening of the dirt.

The surfaces then move about 70 ft before they receive further treatment. This affords a time interval during which the solution can penetrate the dirt.

The truck and wheels then move into another spraying station. At this point they are again doused with an alkaline solution.

A short distance farther the car encounters another pair of side brushes. These extend for the full height of the sides. Rotating in the same direction as the car movement, they scrub the surfaces and apply more of the acid solution, or water, whichever is desired.

Rinsing the Roof

The car next passes under an arch-type sprayer which water rinses only the roof. A short distance farther, two roof brushes are lowered to scrub the roof. These brushes overlap so that no part of the roof is missed. Close by are two brushes which scrub the eave areas. These brushes swing down, the same as the roof brushes, from their retracted positions. Both the roof and eave brushes use only water for this operation.

The car passes under another arch-type sprayer, which rinses the roof and sides, and a truck-and-wheel sprayer. The latter uses hot water as a rinse, which is applied under high pressure supplied by a 200-lb pressure pump. All truck-and-wheel sprayers are either controlled automatically by track switches, or by a selector switch on the operator's control panel.

The car then enters the outbound or final washing station. This includes three pairs of brushes. The middle pair, revolving with the direction of car travel, is for buffing the windows only. The first pair rotates with the direction of car travel while the third pair rotates in the other direction.

The roof and sides then receive a high-pressure water rinse. This is applied by an arch-type sprayer under pressure from a 225-lb pressure pump.

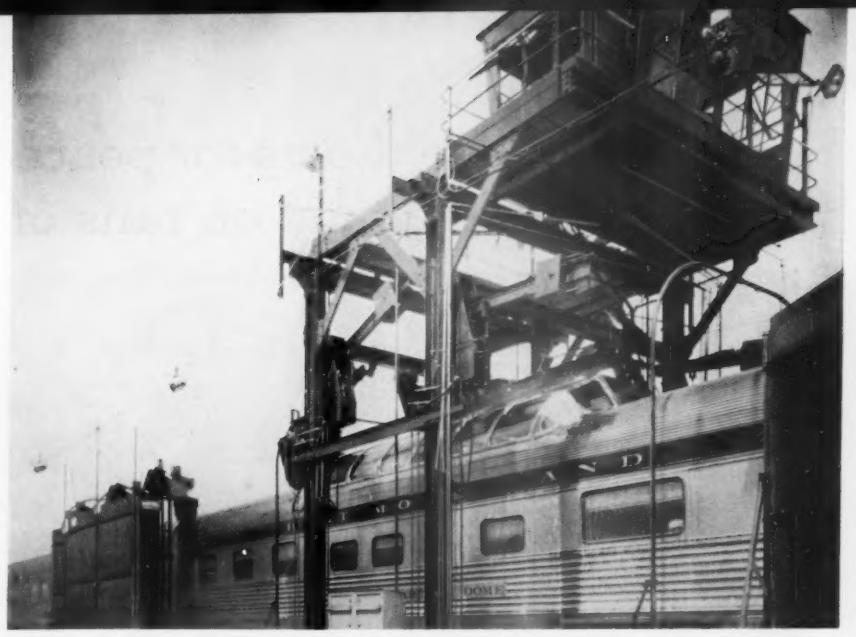
Artesian well water is used in the operation at all points except at the final window rinse. There city water is sprayed on the surface to preclude the possibility of water streaks on the glass when dry.

The side brushes are set in a compression-molded plastic and are backed by stainless steel. In general they have a diameter of 18 in. Some are enlarged to 24 in. at the top or 22 in. at the bottom to insure scrubbing contact on cars having flared tops or skirts. When in operating position, about 3 in. of the bristles make contact with the surface. When in non-operating position, the side brushes provide a clearance of 8½ ft from the center line of track.

The roof brushes vary in diameter from 18 to 22 in. The eave brushes vary in diameter from 18 to 24 in. The larger diameter is at the ends so the brushes will follow the contours of the roofs. When retracted, these brushes provide an overhead clearance of 18 ft. Yet, they can be lowered sufficiently to permit the brushes to be changed out from the ground. The 24-in. brushes have aluminum cores which permit a denser brush to be made in the larger diameters.

Each brush in the plant has its own electric motor. Each brush also has its individual water sprayer, which applies the liquid to the periphery of the brush for flushing the solution and dirt out of the brush. The brushes are moved into operating position by compressed air. Releasing the air permits counterweights to retract the brushes automatically. This arrangement also brings the brushes to their retracted position in the event of an air failure.

The train washer was placed in operation in June of this year. "The plant," said a Washington Terminal officer, "has enabled the WT to wash all types of passenger equipment faster and more economically than was possible by hand. Also, we get a more uniform job."



ROOF BRUSHES can be adjusted to scrub dome cars that reach 15½ ft high, down to some stainless steel ones only 11½ ft high. Control house operator has aerial view.

LOOKING DOWN the washer from the end of the final washing station. The single-track facility has concrete washing platforms 23 ft wide and 218 ft long.

FINGER-TIP CONTROL makes for fast and easy handling of the washer. The operator's control panel is in an elevated cabin atop the washer.

America's atoms-for-peace program moves ahead on rails of steel...

Another example of how railroad progress goes hand in hand with U.S. progress

From the very start of the nation's vital atoms-for-peace program, America's progressive railroads have played an essential role. The transportation job required in the construction of nuclear projects is vast and complex—and will become more so. And no other form of transportation can handle it with the efficiency and economy of the railroads.

Ever increasing efficiency enables the railroads to keep pace with the newest and most dramatic developments in our national life—a partnership in progress that is essential to every one of us, in peace as well as in war.

RAILROAD PROGRESS: *Electronic freight yards improve service, speed shipments, keep America's freight on the move.*

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Association of American Railroads, Washington, D. C.

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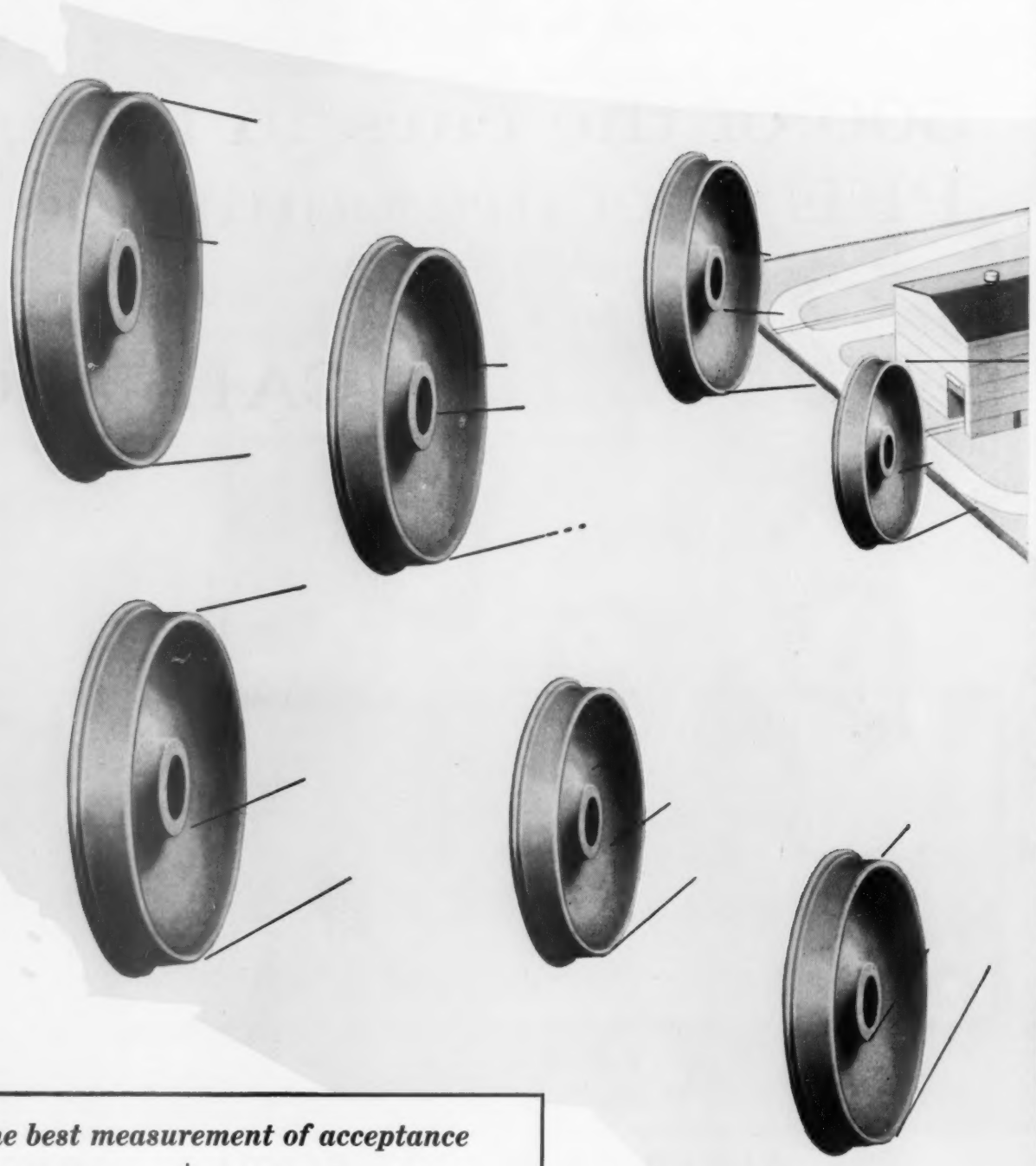

The best measurement of acceptance

1953	*1958*
One thousand Griffin EQS Steel Test Wheels put into service.	Griffin EQS Steel Wheels an AAR standard . . . with over 500,000 in service!

Modern Plants strategically located for service

new Kansas City Plant . . .

More Griffin Steel Wheels rolling out to join the first half-million!

Here's the newest chapter in the story of fifty million freight car wheels produced by Griffin since 1877.

A brand new ultra-modern plant—just put into production in Kansas City—is helping to add more Griffin EQS Steel Wheels per day to the over 500,000 now in use. All railroads and private car lines from coast to coast can now expect better service through strategic plant location.

Service of the first half-million has demonstrated the cost-cutting qualities of Griffin Steel Wheels: longer service life . . . better wear . . . greater uniformity . . . closer tolerances . . . a complete wheel inventory with fewer tape sizes and full interchangeability.

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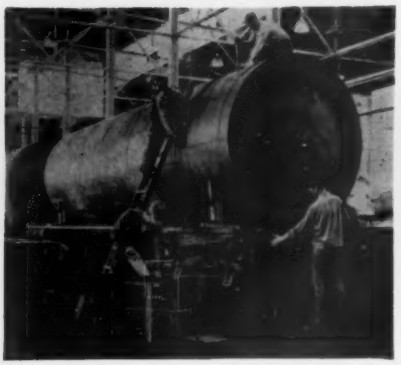
and watch your costs go down!

GRIFFIN WHEEL COMPANY, 445 N. Sacramento Blvd., Chicago 12, Illinois
In Canada: Griffin Steel Foundries, Ltd., St. Hyacinthe, Quebec

New Products Report

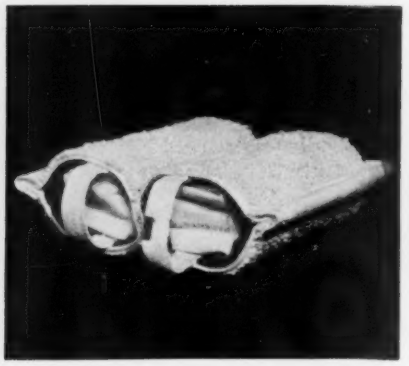
Instrument House

Style HM instrument house has been designed with primary consideration given to the features of modular construction, improved lifting facilities and flexibility of interior arrangements. The rugged, steel-sheet construction affords a minimum of maintenance. Railway signaling equipment and apparatus are offered maximum protection from exposure to the elements with the dust-tight slip-joints. Elimination of various size spreader bars for lifting is accomplished by utilizing built-in lifting pins in the top of pilasters located at each end of the house. Arrangements have been included for mounting on concrete or cast-iron piers. The instrument house can withstand the severe stresses and strains to which it is subjected when being lifted for shipment and installation. This rigid construction also permits supporting the house at the corners, thereby minimizing foundation requirements. Provision has been made for various shelf arrangements on sides and ends of the house. The interior may be lined with insulation if desired. Style HM houses are 9 ft 2¼ in. high and 6 ft 6 in. or 8 ft 6 in. wide. *Union Switch & Signal, Division of WAB Co., Dept. RA, Swissvale, Pa.*



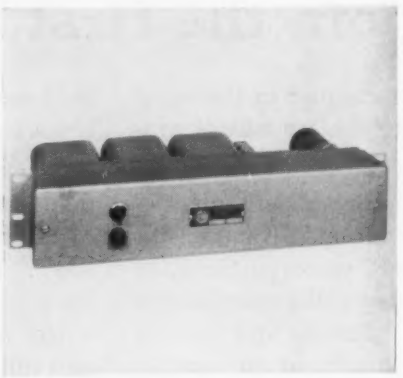
Car Insulation

Rubatex Insulated Hardboard has been used to insulate tank cars for transporting liquid carbon dioxide. In making the tank car installation, blocks of 2-in. thick Rubatex were fabricated to fit contour of the cars. The 27 x 54-in. pieces were adhered to the tank surface with a cold adhesive. Rubatex can be shaped with special wood working tools. No vapor barrier was employed. The material, which is closed cellular rubber, does not absorb moisture. *Rubatex Div., Great American Industries, Inc., Dept. RA, Bedford, Va.*



Journal Lubricator

The Albert twin-type reversible lubricating pad consists of an outer blanket of 100 per cent cotton fibers tuffed with a highly absorbent lamp type wicking and backed up with a special felt to insure immediate absorption of oil. Canvas duck encloses a reinforced tempered blue steel spring assembly which holds the pad in contact with the journal at all times. Handles, with wicks, are sewed across the entire pad. The pad has AAR approval for test applications. *Albert Mfg. Co., Dept. RA, 4912 Hohman Ave., Hammond, Ind.*

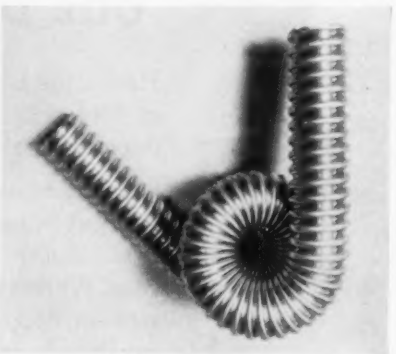


Yard Evaluation Computer

A mobile laboratory, housed in a large truck, is now available for railroad service on a contract basis as an ultra-modern yard evaluation computer. It is used to analyze the characteristics of gravity yards to determine optimum adjustment of control equipment in automatic yards and to make engineering studies of manual yards. The yard evaluation computer can be used during regular yard operation, without use of special test cars, and without interference with revenue traffic. *General Railway Signal Co., Dept. RA, Rochester 2, N. Y.*

Telegraph Power Supply

A new magnetically regulated multi-range telegraph power supply, which occupies only 3½ in. of 19-in. relay rack space, features new compact silicon rectifier units. Output voltages of 110, 130 or 160 volts are available from this unit by simple changes of strapping. They remain constant despite changes from no load to maximum rated load of ½ amp. Regulation is accomplished without use of tubes, transistors or moving parts. *Electronic Communication Equipment Co., Dept. RA, 1249 W. Loyola Ave., Chicago 26.*



Cable and Conduit

New sealed, continuous light-weight metallic sheath, termed C-L-X, houses appropriate insulated wires and cables. This combination provides an almost indestructible line of cable for electrical power transmission, communication and signaling for railroad installations. It provides complete protection from water, gas, chemicals, oil and mechanical damage. C-L-X is ideal for aerial application as well as direct burial and interior installation. *Simplex Wire & Cable Co., Dept. RA, 79 Sidney St., Cambridge 39, Mass.*

Better Service and Cost Control

(Continued from page 10)

activated public opinion. The Smathers bill "put out a few grass fires," but further action is needed in the next Congress and in the Congress beyond that.

T. T. Blickle, general manager—mechanical of the Santa Fe, told the Locomotive Maintenance Officers Association that the "problems encountered while going through the dieselization process were quite different than the major problems facing us today . . . Most of the economies resulting from conversion from steam to diesel have already been realized." The pressing problems of the moment are:

- "Tremendous" increases in labor and material costs coupled with the increasing age of the locomotive being operated and maintained.
- Fluctuations in traffic which now make it necessary for fully dieselized railroads to lay up locomotives with consequent decreases in utilization and the problems and costs involved in their storage.
- Management interest in "cheaper" fuels which in some cases have upped maintenance costs and road failures while increasing the investment in the locomotives requiring special combustion or fuel-handling equipment.
- Obsolescence which is already at the stage where consideration must be given to either modernization or purchase of replacements with a simultaneous study of the problem of providing at the lowest cost stand-by locomotives to handle peak movements.
- More restrictive ICC Locomotive Inspection Rules which will become effective on January 1.

"It is going to be necessary to find additional ways and means of saving man-hours and materials," Mr. Blickle said. "Committees of the LMOA have done a magnificent job in the past and their efforts have helped attain the position which the railroads hold today in diesel locomotive operation and maintenance . . . Mechanical Departments are today faced with one of the greatest challenges—that of getting the job done in the face of rising costs and limited budgets . . . We must take full advantage of the skills and knowledge which are available, and of new techniques as they present themselves."

R. M. MacDonald, director of operation, Board of Transport Commissioners for Canada, described some of his organization's recent activities for the Air Brake Association. This regulatory group, Canadian counterpart of the ICC in the U.S., has recently directed the development of a uniform set of Air Brake Rules. There was no arbitrary action; and management, supply and labor groups were given every opportunity to express their views. The new rules represent "a fine example of what can be accomplished when a common problem is attacked with reason and good will," according to Mr. MacDonald. A similar series of steps produced the Uniform Code of Operating Rules prescribed by the Board of Transport Commissioners for Canadian railways.

Mr. MacDonald discussed Bill C-52, recently passed, which amends the Railway Act and permits the Board of Transport Commissioners to make grants to Canadian railways for the purpose of placing reflective markings on the sides of rolling stock. This legislation was the result of five years' study which showed that reflective materials are an effective solution to the problem of having motor vehicles run into the sides of trains at grade crossings. The study went on to show that the provision of these markings would involve considerable money, and that this was an expenditure which should not be borne completely by the railways. The result is that Bill C-52 allows government grants of up to 80 per cent of the total cost of applying reflective markings.

The Car Department Officers Association outlined a four point program which should enable railroads to furnish equipment which will satisfy both shipper and consignee. According to a CDOA committee, railroads and carbuilders must adhere to the following:

- Standardize car parts and equipment to reduce car maintenance and delays for repairs.
- Consider requests of shippers and consignees for specially equipped cars where traffic warrants.
- Supply shippers with suitable clean equipment to reduce loss and damage.
- Equip cars with suitable lading securements to reduce damage costs to shippers.

In the design of cars, the following are recommended: Further development of side doors and openings to facilitate economical loading and unloading; development of anchoring devices to reduce damage to car linings; mandatory use of automatic slack adjusters; standardization and improvement of car truck designs; research to minimize metal corrosion; greater strength in freight car ends; and improved body bolster and side sill designs.

Another CDOA committee commented on the "disappointing" journal performance figures produced in 1957. Recently developed lubricators present another field where standardization and material improvements are needed. The committee pointed out that applications of lubricators are not being made at a rate which would equip all cars with these devices by the January 1, 1960 date when their use is to be mandatory under present AAR Interchange Rules. Journal stops and roller bearings received favorable notice. A CDOA survey showed that there were 3,511 mechanical refrigerator cars in service on June 17, 1958.

Railroads should be prepared to meet increased car loadings, L. L. Adams, assistant to vice president—traffic, U. S. Steel, warned car officers last Tuesday. He said that J. M. Symes, PRR president, had only the previous day predicted the worst car shortage ever if traffic picks up rapidly. Already U. S. Steel is experiencing difficulty in getting covered gondolas. Mr. Adams predicted that the impending car shortage would duplicate those of the past where the first shortage occurs in 65-ft gondolas, then in wood-floor gondolas, then in box cars, and finally in a general shortage of all types of cars.

Dearmont Calls for Action

A Five-Point Program

An aroused public is aware of the railroads' plight, Russell L. Dearmont, president of the Missouri Pacific, told railroad and supply men attending the annual meetings of the Coordinated Mechanical Associations and the Allied Railway Supply Association. But now that the Transportation Act has been passed, Mr. Dearmont saw need for further action. In the legislative field, he named five needs:

- Repeal of the 10 per cent tax on fares to attract more passengers.
- Continuation of the reserve fund to give the railroads capital to modernize plant and equipment.
- Freedom to set rates. Mr. Dearmont believes the railroads have got to reduce rates to meet the competition and because railroads are geared to handle volume traffic.
- Subsidies to the competition must get attention. The competition must pay a reasonable share of its costs.
- Railroads need the right to give diversified service.

In the labor field, Mr. Dearmont labeled the set-up stupid, inexcusable and wasteful. Noting that all locomotive engineers do about the same kind of work, he said pay ranges from $2.60 to $11.59 per hour on his road. He termed the more than a million dollars spent by his road because of the Arkansas excess crew law money "thrown down a rat hole."

Mentioning the experiments made by the MoPac to increase passenger business, Mr. Dearmont reported they have been both interesting and successful. He believes that, as long as roads have to haul passenger cars, it is preferable to fill them with people. He said the MoPac was making more money with reduced fares and better and more courteous service.

Passenger Picture: It's Gloomy

(Continued from page 9)

ence of the American public for motor and air travel is undermining the potential value of railroad passenger transportation to the national defense, this situation should be fully disclosed so that it may be recognized as a calculated risk."

Interested parties have 30 days to file exceptions to the examiner's report. An additional 20 days will be allowed for the filing of replies.

Among other highlights of the report:

- Rising wages—coupled with restrictive labor agreements—have contributed heavily to the passenger service deficit. Mr. Hosmer cited this example, among others: "The Burlington's Denver Zephyr, a high-speed overnight train between Chicago and Denver, running 1,034 miles in 16.5 hours, requires the services of eight engine crews, whose members receive a total of ten and one-third days' basic pay."
- Higher or lower fares may be a partial answer in some cases but this is a problem for the managers of individual roads. Mr. Hosmer found "much to be said in favor of allowing (railroads) a large measure of managerial discretion in pricing their service."
- "Commutation traffic probably will be the last form to disappear for the reason that, despite the tremendous development of highways and other facilities such as tunnels and bridges for the benefit of motor transportation, a considerable number of commuters will continue to be dependent on rail transportation for some time to come."
- "There is clearly a continuing need of good railroad transportation for the postal service . . . (but) it appears to be not essential to the needs of the postal service that the railroads continue to carry passengers." The answer, said the report, may be trains devoted exclusively to mail and express.

Feather-bedding Study Proposed

Pennsylvania President James M. Symes has proposed a sweeping probe of the effects of feather-bedding on the transportation industry.

Specifically, he suggested that a commission be set up to "investigate the extent to which feather-bedding is a burden on interstate commerce."

In any enterprise system, Pennsy's president declared, "rules which are designed to defeat man's efforts to produce the most with the least effort, cannot be justified and should not be tolerated."

At first, he said, the study should probably be confined to the railroad industry, "where the rules and agreements are spelled out in great detail. But certainly for the sake of the over-all economy it should move from there into other forms of transportation."

Such an investigating commission, he added, "should be more than a mediation board or similar advisory body."

(The suggestion was reminiscent of a recommendation by an emergency board in 1955 for establishment of a commission "to review and modernize the wage rate structure as a whole of the operating classifications in the railroad industry." The proposal grew out of an investigation of demands by the ORC&B for a graduated pay scale on the weight-on-drivers basis for conductors and brakemen. The 1955 recommendation, however, failed to develop into any such modernization of wage structures.)

Mr. Symes proposed the study in an address to a Transportation Association of America institute in Pittsburgh, Pa. It was one of 10 suggestions he made in a program to "help achieve both the immediate and the long-range restoration of railroad health."

Another of his proposals was a familiar one: "Establish a government agency to lease equipment to railroads so that each of them can participate in furnishing a fair share of the fleet of rolling stock which will be needed in the years immediately ahead."

Mr. Symes did not mention directly the loan guarantee provisions of the Transportation Act of 1958. By implication, he played down the effect of the program.

Still, Mr. Symes declared, some means must be found "to provide the presently destitute railroad industry with new and modern equipment for which they do not have adequate capital funds . . . There is only one way I know to do this . . . there is not any satisfactory, workable or practical alternative."

PRR's president devoted considerable time to contrasting the Russian and the American approaches to transportation, drawing on the experiences of Railway Age Publisher R. G. Lewis on his recent tour over 5,600 miles of railway in the U.S.S.R.

There's a lesson for the U.S., Mr. Symes noted, in Russia's intense pressure for a bigger, better railroad plant. The Soviet Union has the material, the manpower, the brainpower to build other transport forms—but their emphasis is on the railroads.

"It must be," he said, "that as a nation determined to be powerful, both economically and militarily, they purposefully decided to put their blue chips on railroads."

While Russia moves one way, he said, the U.S. has moved another. Billions of dollars have been poured into tax-exempt facilities for non-rail transport here. Earnings haven't enabled the railroads to keep pace.

"The result has been a steady erosion of the nation's only form of transport which has inherent characteristics for emergency expansion of its capacity. As a result of this erosion and the lack of money for American railroad plant and equipment we are in a precarious condition."

How can the situation be improved? Mr. Symes' 10 points included, in addition to the feather-bedding and lease proposals:

- Establish a Cabinet-rank Secretary of Transportation post.
- Tax all transportation on an equal basis.
- Incorporate suburban rail transport in an over-all program operated under an integrated commission without cost to participating railroads.
- Repeal the passenger excise tax.
- Remove all taxes from deficit-ridden passenger facilities.
- Relieve railroads of grade crossing protection and maintenance costs.
- Give transportation companies the right to engage in other forms of transportation.
- Encourage railroad mergers.

NEXT WEEK

A complete report on last week's Chicago meeting of the Signal Section. The meeting, still in progress as this issue went to press, pointed up the expanding role of signal officers in helping improve railroad operating efficiency with facilities that meet today's needs of flexibility, ruggedness and safety.

ICC Grants More Freedom For SP-Owned Truck Line

More freedom for a rail-owned motor carrier was decreed last week by the ICC. Over-riding the protests of other truckers, the commission authorized the SP-owned Pacific Motor Trucking Company to extend its operations as a contract carrier of autos and trucks from three General Motors plants in California to on-line rail points in Oregon, Nevada, Arizona, New Mexico and Utah. There are no key-point or prior-or-subsequent-rail-haul strings attached.

The commission turned down PMT's request for authority to extend its operations to points off the SP line. This, said the commission, would deprive connecting rail carriers of substantial traffic.

Commissioners Arpaia and Murphy dissented from the majority decision. Mr. Arpaia contended: "The majority has not only failed to follow Congressional policy but has misapplied the Congressional mandate"—i.e., that the various forms of transportation be kept separate and competitive.

M/W Men Increase RR Net Income

Savings produced by mechanization of maintenance work expected to play even bigger role in the future. Theme is stressed in major addresses before Roadmasters' and Bridge & Building conventions.

The attitude of railroad managements toward their maintenance of way departments is undergoing a significant change. Management now regards this department as a factor that can make an important contribution to net income. And management is convinced the contribution will grow in importance as time goes by.

This theme cropped up time and again in major addresses delivered at the Conrad Hilton hotel, Chicago, before joint sessions of the annual conventions of the Roadmasters' Association and the American Railway Bridge & Building Association. C. J. Fitzpatrick, president of the North Western, dwelt on it at length in an address entitled "Productivity—A Key to Railroad Prosperity." Clark Hungerford, president of the Frisco, mentioned it frequently in an address on "Railroads—Past, Present and Future." And R. G. May, vice president of the AAR's operations and maintenance department, referred to it indirectly in an address entitled "Railroading—Men, Methods and Materials."

"Down through the years," said Mr. Fitzpatrick, "I have on occasion been told by maintenance men that they work under somewhat of a psychological disadvantage because, due to the very nature of their activities, they are spenders of railroad funds, rather than revenue producers.

"We on the North Western don't accept this view. It is no more accurate than to say the revenue producers can take sole credit for a railroad's net income. It takes both sides of the ledger to develop net income. How large that will be is determined not merely by the amount of total revenues but also how efficiently and how wisely the spending departments meet their necessary commitments. In maintenance activities, any increase in productivity for each dollar spent is the best indicator of effective supervision and administration."

Mr. Fitzpatrick referred to the progress that has been made in mechanizing the maintenance of way forces. He is sure, however, that "we are only on the threshold of such mechanization and that 25 years hence railroad men and maintenance equipment designers will look with amusement at some of the machinery which we pride ourselves with having today."

Then he threw in this word of caution: "While the mechanization of roadway equipment is still comparatively new, and in its infancy, those who assume responsibility for its future development should not let themselves be trapped into mossback thinking. By this I mean they should not develop a resistance to change, simply because they have a good product.

"All too often in the past the railroad industry has been accused of just such resistance, particularly in car design and construction. It is understandable that equipment and supply manufacturers, and railroad personnel who work with them, can become loyal to one product, but that loyalty and attachment is false and a detriment to the development of the railroad industry if it amounts to closing your eyes to greater improvement and efficiency.

"Just as the public will always flock to the man who builds a better mousetrap, so will railroads be attracted to roadway machines that show real improvement over their predecessors. In other words, the developers of roadway machines will establish reputations not so much on what they already have placed on the market but on the better machines that will inevitably come as a result of your open mindedness and ingenuity.

"In my grandfather's day the principal qualification for a maintenance of way man was a cast iron back with a hinge on it. Today the qualifications have changed. The hinge has been removed, mechanized into a power tool and put in front of him where he can see it and control it. The result is that more and more emphasis is being placed on his skill rather than his strength to get the job done more easily, efficiently and quickly.

"If we are unique among transportation agencies in that we alone have our own right of way to maintain, then it behooves us to be unique in our methods of reducing maintenance costs and doing so on our own initiative.

"The stakes are high if we attach any meaning to the inherent advantages of railroads over their competitors as the most efficient means of mass transport in existence. There can be only one objective: To translate that inherent advantage into actuality by producing transportation in increasing volume and at an ever-decreasing cost.

"The shipping public will inevitably buy our product if the price is right. Railroad costs determine how attractive the price will be. That is why I believe the cost of maintenance—which amounted to a billion and a half dollars as of last year—is one of the important keys to railroad prosperity.

"This is an era of great technological

CLARK HUNGERFORD, president, Frisco —"The challenge we face today—and the one we shall face tomorrow—is to find ways to bring about further improvement."

R. G. MAY, vice president, operations and maintenance department, AAR—"Even the casual observer must admit they [the railroads] are doing an outstanding job under the most trying conditions."

B. R. MEYERS brought greetings from the American Railway Engineering Association, of which he is president. Mr. Meyers is chief engineer of the North Western.

E. L. ANDERSON, president of the Roadmasters' Association and retired chief engineer, Frisco.

W. H. HUFFMAN, president of the Bridge & Building Association and assistant chief engineer, Chicago & North Western.

development and we in the railroad industry dare not overlook the opportunities to share in its benefits. Such benefits, however, would be meaningless if at the same time we adhere to obsolete practices or tolerate and pay for wasteful or unnecessary productivity."

Mr. Fitzpatrick described the railroads as "a great natural resource as producers of cheap volume transportation." But this resource, like all others, must be developed, he added. "In that development many doors must be opened. Some were opened by recent congressional actions. We are hopeful it will open others. But the main job remains with us in all our railroad operations, procedures—and thinking." He is convinced that "as those doors are opened, railroads will be able to provide the public with mass transportation at a greater volume and at a lower cost than ever before."

Greater mechanization of maintenance of way work will help open those doors, declared Mr. Fitzpatrick. "To my mind," he said, "the surface has only been scratched in this most important field. The potential for greater productivity in railroad maintenance alone is tremendous, far more so than can be found in any other form of transportation, if only for no other reason than that we have more to maintain."

The need for more progress in M/W mechanization was cited by Mr. May while, paradoxically, he was discussing the progress already made in this direction. "One marked result of this technological progress," he said, "has been a reduction in rail employment since 1945 of nearly half a million men. Now, no one likes to see jobs abolished, but in an industry where wages are continually increasing and where labor costs eat up 54 cents of each dollar of revenue, attempts to save in this area were inevitable.

"The average railroad employee receives $5,400 a year in wages. Just for a moment, try to imagine where the industry would be today if we were still paying an extra half million men that kind of wage each year. Despite the drop in employment, however, individual wage rates have risen so steeply that the railroads' total wage bill last year was $5,358,000,000, or 28 per cent more than in 1946."

Mr. Hungerford also developed figures to show that further progress is needed in efficiency to match the increase in wages. "In relation to our revenues," he said, "we spent more on maintenance of way and structures in 1957 than we did in 1938. In 1938 we spent $420 million. In 1957 this had risen more than three-fold to $1,400,000,000." During the intervening years, prices not only went up but wages of the lowest paid track worker increased more than four-fold, he pointed out. "Offsetting these factors, was a reduction in man-hours of 33 per cent, from 441 million in 1938 to 330 million in 1957.

"In those figures we find evidence of the ingenuity of our maintenance personnel who, year in and year out, have moved methodically on to ever higher standards and better ways of doing a job."

"There is little doubt," continued Mr. Hungerford, "that the years ahead will see a continuation of these efforts; nor can there be any doubt that the entire railroad plant of the future will reflect a higher state of development than the one we know today . . ." He is convinced that the roadway of the future "is going to be a tougher, more efficient instrument of precision—and you gentlemen will have made it all possible."

Rate Hike Must Precede Pay Hike

Canada's railways are adopting a new method for attacking the major problem blamed for placing the carriers in their present serious financial situation. They're going after the money to pay wage increases before—not after—agreeing to the increases.

Historically, the procedure has been reversed. Unions won wage increases; management—months later—won rate increases to cover the wage boosts. Now Canadian National and Canadian Pacific are delaying accepting or rejecting a wage boost recommendation until they can explore the possibilities for obtaining the revenue to cover the increase.

The issue is the Conciliation Board recommendation for increases totaling about 14 cents an hour over a two-year period for some 130,000 non-operating employees. The carriers estimate that the recommendation, applied to all railway employees, would cost about $60,000,000 annually.

The railways' schedule called for an application for a freight rate increase to be made last week to the Board of Transport Commissioners. The proposal: an immediate rate boost of 19 per cent (25 cents per ton on coal and coke). CNR and CPR have requested an early-October hearing, "in view of the urgency of the situation and mindful of the fact that a strike vote is being taken by the non-operating unions."

This income-before-outgo approach in rate-wage matters drew emphatic comment recently from CPR President N. R. Crump:

"Invariably the wage increases [are] granted—usually there has been retroactivity—and yet it has taken us many months to obtain a freight rate increase to offset those increased costs. While those hearings are on before the Board of Transport, of course, our increased wage costs are going on and the position of the railways deteriorates. This time lag has been a matter of months, up to as much as two years . . . And it is this time lag between wage increases and rate increases that had put the railways of Canada in the serious financial position they are in today, in my opinion."

How serious is the financial position? Mr. Crump and CNR President Donald Gordon, in a letter to Minister of Labor Michael Starr, said that if the $60,000,000 wage cost were added to the deficit currently being incurred "this would result in a loss of over $90,000,000 per annum before any payment to the owners of these systems (CPR and CNR)."

It's just wishful thinking, President Gordon said, "for anyone to believe that it is possible for the costs of any service to be absorbed in any other way than in the price for that service . . . Our attitude has been that the user of the railway service is the person who should pay the price for that service and any other action

(Continued on page 36)

How 9 RRs Beat the Hot Box Menace

What is the present status of automatic hot box detection? How accurate is it? Is it economically justified? How does it benefit train operations, and what is its future?

To answer these questions Railway Age went to the nine U. S. railroads now using automatic hot box detectors. The following report is based on their experiences, plus field trips to detector installations.

Working with the Servo Corporation of America, the Chesapeake & Ohio installed the first hot box detector, on a railroad, at Norge, Va., in November 1956. Since then, detectors have been installed on the Norfolk & Western; Reading; Boston & Maine; New York Central; Southern; Delaware, Lackawanna & Western; Baltimore & Ohio and the Pennsylvania.

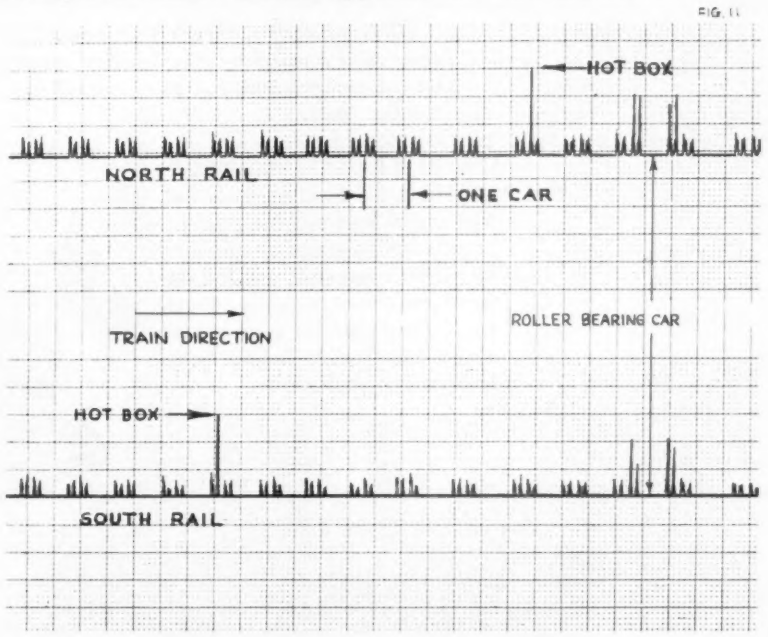
Many solutions to the hot box problem have been proposed. Some are effective, but the problem remains. Freight cars do run with hot journals at one time or another, resulting in delays to trains and, sometimes, expensive wrecks. Automatic and accurate detection of hot boxes is one economical method of reducing such delays and preventing the wrecks.

The Servo hot box detector is mounted along the track to view passing journals of moving freight trains. A pen-graph recorder, actuated by the detector, records a pattern showing each journal on the train. The pen's deflection is proportional to the heat radiated by each passing journal. An abnormally hot journal shows a relatively large deflection or "pip" compared with a normal box. Roller bearing cars and locomotives are easily identified because their pips are slightly taller than those of a solid bearing journal, but appreciably shorter than a pip indicating a hot box.

As the accompanying chart shows, a pip is recorded for each journal. The height of the pip is proportional to the heat radiated by the journal. It is a simple matter of counting pips from the front end of the train to locate accurately the abnormally hot journal. The consensus of railroads using detectors appears to be that a 12- or 15-mm deflection indicates an abnormally hot journal. A car with a journal causing such a deflection should be stopped and inspected. As the chart indicates, the hot box having a 15-mm deflection is readily observed.

Identification of roller bearing cars has not been difficult because a roller bearing car will show four large pips per side, that is, eight all together The symmetry of the pattern of four tall pips in a row is easy to spot. Also, the operator may check these pips with those of the engine, which he knows has roller bearings. While it is true that all high pips on one car could indicate hot boxes, chances are mathematically remote that such an instance would arise. It has never happened on any of the nine roads.

Composite chart shows typical hot box indications



ROLLER BEARING car is easily identified by four tall pips on each side of car.

Here's another proof of the accuracy of the detectors. Several roads reported that train crews, after being told they had a hot box after stopping their train, walked back to the specified box, felt it, and were unable to decide whether it was abnormally hot. One crew, disbelieving that the detector equipment had pin-pointed a hot box, opened the box and was surprised to see the waste burst into flame when the journal lid was lifted.

In one instance on the C & O, the crew was unable to decide from inspection of the journal whether the car should be set out. After further consultation with the man who reported the defective journal had produced a 15-mm deflection, the crew set the car out. When the carmen jacked up the car, they found the babbitt had run down to the brass.

The old theory that a journal will smoke when it gets hot seems to have gone into the discard recently with the use of journal lubricators. However, the hot box detector has pointed out abnormally hot journals which are equipped with journal lubricators. In one of these cases, the lubricator pad was not working properly, so the oil was not being evenly distributed around the journal. The detector indicated a hot running journal. Visual inspection by the crew had not revealed anything out of order. However, when carmen inspected the journal they found the true situation.

What Is 'Critical'?

Some roads claim they have stopped trains when the detector's pen showed deflection above normal, but that no hot box was found. The general opinion appears to be that, with proper adjustment of the recorder (4 to 5-mm deflection for a normal running journal), trains should be stopped which show journals with 12- or 15-mm deflection. Servo Corp. recommends that the critical deflection for a hot box should be a differential deflection of 8mm or more. That is, the difference in the deflections indicated by the journals at each end of the same axle.

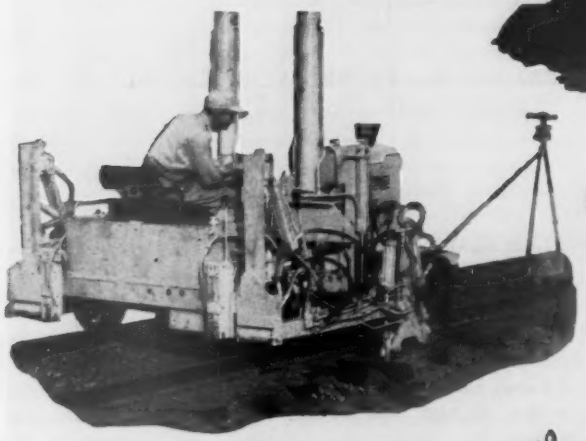
One railroad uses the detector as follows. Any time a train causes a detector to show at least a 12-mm deflection, the

(*Continued on page 31*)

Maintain Operating Ratios

YOU, too, can maintain your operating ratios despite rising costs and declining revenues by utilizing these Kershaw machines. The savings in maintenance will be an eye-opener and you can pay for the machines out of your savings, often in the first year.

KERSHAW BALLAST REGULATOR may be used as a track patrol, with out-of-face surfacing gangs, or retimbering gangs. It also may be used to regulate, scarify, deweed and shape the ballast shoulder. Kershaw has a Standard and a Heavy Duty Ballast Regulator to suit your needs.



KERSHAW SUPER JACK-ALL, tamps on the side of ties with both vibration and compaction. The machine has a 30-second raising and tamping cycle and has satisfactorily raised track ahead of two multiple tampers.

KERSHAW SPOT TAMPER combines the work load of a Jack-All and a multiple tamper to provide tamping on any railroad under any conditions, even through switches.

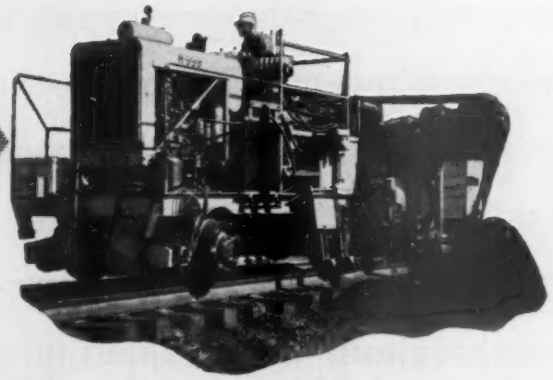
KERSHAW TRACK CRANE with TIE INSERTER redistributes new ties after they have been unloaded and picks up and stacks old ties. A new Tie Inserter attachment then is used to insert the new ties.

KERSHAW ... TRACKWORK EQUIPMENT

...with these Kershaw Machines!

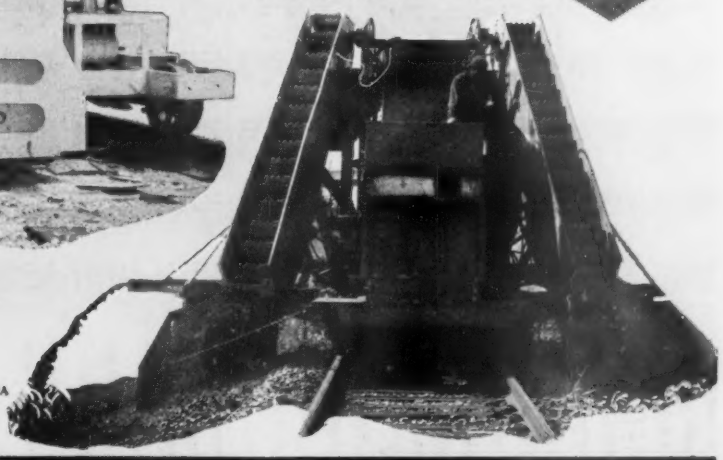
KERSHAW TIE REPLACER, a combination tie remover, tie bed scarifier, tie replacer, and crib scarifier, utilizes the rams on the scarifier head to clamp the rail and raise the rail, allowing the tie to be easily removed. The machine then scarifies the tie bed and inserts the new tie without changing the surface of the track.

KERSHAW UNDERCUTTER AND SKELETONIZER is used in reconditioning gangs to skeletonize, or undercut and lower track.



KERSHAW CRIB-ADZE with Wood Preservant Attachment working off either rail cribs between ties, adzes the ties and sprays wood preservant all in one operation, at the rate of 100 feet per minute.

KERSHAW BALLAST CLEANER is used independently to clean shoulder ballast and also can be used in reconditioning gangs behind the Undercutter and Skeletonizer to clean ballast and return it to the track.



KERSHAW MANUFACTURING CO. INC

P.O. DRAWER 1711 MONTGOMERY, ALABAMA

DEVELOPED, TESTED AND PROVEN ON THE JOB!

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1958

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1958	Total (inc. misc.) 1957	Operating Expenses: Maint. Way and Structures: Total 1958	Total 1957	Deprec. and Retirements	Maint. Equipment: Total 1958	Total 1957	Deprec. and Retirements	Traffic	Transportation	Total 1958	Total 1957	Operating ratio 1958	Operating ratio 1957	Net from railway operation	Railway tax accruals	Net Railway operating income 1958	Net Railway operating income 1957
Akron, Canton & Youngstown	July	171	419	....	428	563	50	83	4	67	72	15	42	146	353	419	82.6	74.5	74	39	13	44
	7 mos.	171	2,749	....	2,820	3,827	357	564	38	444	511	104	278	988	2,408	2,797	85.4	73.1	412	232	42	314
Alabama, Tennessee & Northern	July	214	241	....	243	290	50	40	6	10	22	6	4	82	152	176	62.5	58.5	92	9	37	21
	7 mos.	214	1,708	....	1,726	2,326	347	345	40	178	117	39	29	614	1,198	1,118	69.4	48.1	529	99	63	297
Atchison Topeka & Santa Fe	July	13,097	49,615	4,571	58,879	58,586	6,420	8,241	795	9,571	10,610	2,360	1,365	17,484	37,393	41,387	63.5	70.6	21,486	11,886	9,441	7,755
	7 mos.	13,127	279,530	22,814	331,787	357,354	40,076	51,706	5,255	66,102	73,852	16,176	9,171	118,423	250,109	273,530	75.4	76.5	81,678	47,213	32,359	34,920
Atlanta & St. Andrews Bay	July	81	303	....	306	348	28	52	3	28	29	8	7	70	153	179	50.0	51.3	153	71	49	57
	7 mos.	81	2,384	....	2,408	2,652	235	299	24	206	202	51	48	487	1,126	1,177	46.8	44.4	1,282	598	439	535
Atlanta & West Point	July	93	218	26	295	309	42	45	7	52	62	14	16	161	291	299	98.8	96.6	4	19	—37	—16
	7 mos.	93	1,557	166	2,097	2,237	259	308	48	368	434	100	119	1,009	1,904	2,048	90.8	91.5	193	129	—96	—21
Western of Alabama	July	133	248	24	308	320	42	43	8	59	61	19	18	131	272	285	88.2	89.2	36	34	14	21
	7 mos.	133	1,861	156	2,280	2,360	317	360	60	401	465	134	137	958	1,963	2,094	86.1	88.7	317	230	112	159
Atlantic Coast Line	July	5,307	9,031	1,243	11,149	11,815	1,881	1,926	267	2,389	3,195	668	451	5,065	10,441	11,709	93.7	99.1	708	Cr.225	413	281
	7 mos.	5,296	71,361	9,484	87,632	98,874	12,711	14,625	1,450	16,410	20,638	4,698	3,224	35,328	73,021	82,007	83.3	82.9	14,611	6,525	4,075	5,805
Charleston & Western Carolina	July	343	510	....	521	492	139	145	15	96	105	29	22	171	445	458	85.4	93.1	76	40	32	37
	7 mos.	343	3,997	....	4,093	4,202	801	989	48	592	702	204	150	1,197	2,862	3,229	69.9	76.9	1,231	740	435	473
Baltimore & Ohio	July	5,935	25,635	1,275	29,006	36,380	2,897	4,646	573	5,146	6,890	1,152	964	14,014	24,822	30,771	85.6	84.6	4,184	2,059	518	2,864
	7 mos.	5,941	193,408	9,020	217,385	272,219	21,867	31,428	3,796	37,039	51,313	7,957	6,629	97,220	175,207	218,962	80.6	80.4	42,178	14,319	15,446	22,076
Staten Island Rapid Transit	July	29	188	81	275	234	55	52	12	35	33	2	2	163	290	279	105.7	119.2	Cr.16	45	—80	—113
	7 mos.	29	1,439	473	1,987	1,870	376	401	78	259	259	13	14	1,088	1,965	1,998	98.9	106.9	21	317	—461	—644
Bangor & Aroostook	July	602	675	24	740	830	113	168	24	295	237	113	32	287	819	846	110.7	101.9	—79	46	147	169
	7 mos.	602	9,333	161	9,814	10,326	2,368	2,126	135	2,029	1,891	796	234	2,661	7,911	7,795	80.6	75.5	1,903	785	1,679	1,909
Bessemer & Lake Erie	July	203	1,844	....	1,847	3,624	250	215	18	426	626	142	41	498	1,365	1,652	73.9	45.6	482	73	772	1,113
	7 mos.	207	8,078	....	8,175	16,275	1,727	1,574	267	3,592	4,685	981	299	2,898	9,519	10,926	116.4	67.1	—1,343	506	—253	4,049
Boston & Maine	July	1,571	4,504	786	6,026	6,597	816	1,033	153	759	836	298	139	2,811	4,912	5,624	81.5	85.3	1,114	513	136	439
	7 mos.	1,571	34,165	5,286	44,530	50,261	6,704	6,916	1,060	6,156	6,510	2,054	1,034	21,413	38,145	40,784	85.6	81.1	6,385	3,501	—776	3,086
Canadian Pacific Lines Maine	July	234	359	66	457	417	137	148	13	55	72	17	9	160	381	403	83.3	96.8	77	34	—4	—55
	7 mos.	234	4,482	333	5,002	4,848	886	808	119	750	827	121	61	1,415	3,238	3,597	64.7	74.2	1,764	240	994	617
Carolina & Northwestern	July	284	221	....	227	264	52	59	7	31	20	21	5	78	182	173	79.9	65.4	46	12	8	40
	7 mos.	284	1,745	....	1,789	2,118	347	407	48	209	140	135	36	538	1,238	1,213	69.2	57.3	551	127	211	375
Central of Georgia	July	1,763	2,921	130	3,232	3,476	528	502	38	620	617	185	170	1,422	2,933	2,925	90.7	84.2	299	248	135	320
	7 mos.	1,763	21,929	872	24,434	25,644	4,057	3,855	327	4,542	4,400	1,347	1,199	10,182	21,299	20,989	87.2	81.8	3,135	1,602	1,763	2,776
Central of New Jersey	July	600	3,563	513	4,373	4,528	530	648	121	810	867	178	73	2,130	3,801	4,096	86.9	90.5	572	467	—117	—72
	7 mos.	603	24,873	3,555	30,503	34,414	3,702	3,757	884	5,377	6,307	1,012	524	14,912	26,174	27,872	85.8	81.0	4,329	3,233	—305	—1,752
Central Vermont	July	375	697	72	835	943	342	297	27	105	109	9	18	346	854	876	102.2	92.9	—19	54	—203	—119
	7 mos.	379	5,281	378	6,104	6,757	1,813	1,794	134	761	809	67	130	2,565	5,547	5,739	98.9	84.9	557	356	—837	—355
Chesapeake & Ohio	July	5,131	23,686	530	26,001	33,206	2,800	3,996	467	4,586	5,946	1,877	766	10,119	19,968	24,420	76.8	73.5	6,033	2,311	3,925	4,843
	7 mos.	5,131	179,238	3,673	193,120	248,192	21,140	30,308	3,272	34,083	41,811	13,119	5,618	73,044	145,486	172,290	75.3	69.4	47,634	19,552	28,959	43,050
Chicago & Eastern Illinois	July	862	2,523	234	2,972	3,129	413	301	29	504	529	149	139	1,201	2,430	2,392	81.8	76.5	542	211	67	335
	7 mos.	862	17,345	1,180	20,173	22,508	2,597	2,586	222	3,437	3,726	1,055	1,004	8,315	16,550	17,336	82.0	77.0	3,622	1,418	742	2,392
Chicago & Illinois Midland	July	121	269	....	298	534	57	66	9	90	123	24	32	141	361	416	121.1	77.9	—63	Cr.30	—46	38
	7 mos.	121	3,337	....	3,466	4,669	273	328	62	728	734	169	217	984	2,504	2,670	72.2	57.2	962	513	340	884
Chicago & North Western	July	9,289	15,082	1,651	18,271	18,243	2,851	3,495	375	2,566	2,969	968	528	7,528	14,548	15,950	79.6	87.4	3,723	1,235	1,276	144
	7 mos.	9,323	98,270	10,219	119,258	125,802	17,974	20,631	2,656	19,636	20,721	6,805	3,665	53,298	101,986	108,719	85.5	87.1	17,272	8,638	2,142	2,544
Chicago, Burlington & Quincy	July	8,732	17,170	2,246	21,273	21,957	3,257	4,416	642	3,551	3,728	1,015	583	8,756	17,207	18,699	80.9	84.8	4,066	2,187	1,756	1,088
	7 mos.	8,747	115,156	11,086	139,907	143,654	18,617	21,994	3,118	25,979	25,769	6,944	4,346	57,421	113,298	116,915	81.0	81.4	26,699	12,433	10,967	11,425
Chicago Great Western	July	1,469	2,727	14	2,901	3,291	475	501	52	433	525	132	125	952	2,070	2,230	71.3	67.8	831	278	351	388
	7 mos.	1,469	18,825	64	20,088	22,051	3,174	3,205	318	2,978	3,369	926	883	6,486	14,062	14,809	70.0	67.1	6,027	2,012	2,472	2,696
Chic., Milw., St. Paul & Pacific	July	10,590	16,752	1,737	20,684	21,282	3,428	3,931	372	3,511	3,468	916	527	8,341	17,119	18,170	82.8	85.4	3,565	1,583	1,137	619
	7 mos.	10,590	112,288	8,143	133,591	143,276	20,882	25,409	2,924	24,701	27,224	6,366	3,753	55,955	113,723	123,555	85.1	86.2	19,868	10,830	3,645	4,498
Chicago, Rock Island & Pacific	July	7,577	16,823	1,575	19,994	19,867	2,710	3,048	240	2,991	3,062	627	536	7,039	14,216	14,433	71.1	72.9	5,778	2,457	1,849	1,663
	7 mos.	7,595	99,989	9,422	119,708	122,122	14,404	16,906	1,733	20,419	20,644	4,367	3,857	47,358	92,748	94,531	77.5	77.5	26,959	10,949	7,427	9,001
Clinchfield	July	293	1,490	3	1,502	1,596	171	211	21	273	290	104	60	401	968	1,054	64.4	66.1	534	202	508	603
	7 mos.	293	11,887	3	11,964	13,498	1,578	2,093	148	2,300	2,771	712	441	2,917	7,686	8,961	64.2	66.4	4,278	1,427	3,963	4,422
Colorado & Southern	July	716	1,126	97	1,352	1,272	187	235	15	213	213	65	38	572	1,085	1,087	80.2	85.4	267	175	88	56
	7 mos.	716	7,149	444	8,460	8,901	1,188	1,452	127	1,386	1,561	457	243	3,505	6,828	7,364	80.7	82.7	1,632	1,025	658	473
Ft. Worth & Denver	July	1,362	2,355	190	2,795	2,223	285	340	36	271	262	45	74	852	1,598	1,568	57.2	70.6	1,197	471	432	226
	7 mos.	1,362	11,531	869	13,811	12,522	2,045	2,354	236	2,021	1,769	313	493	5,506	10,990	10,514	78.9	84.0	2,921	837	663	443
Colorado & Wyoming	July	39	183	....	283	307	21	— 6	2	36	50	12	1	111	195	188	69.1	61.1	88	58	29	42
	7 mos.	39	1,120	....	1,849	2,652	122	134	16	289	319	84	10	690	1,154	1,528	62.4	57.6	695	432	236	434
Delaware & Hudson	July	764	3,014	153	3,295	4,024	490	583	56	719	778	188	98	1,475	3,051	3,328	92.6	82.7	244	335	—228	492
	7 mos.	764	24,371	959	26,269	32,494	3,345	3,902	499	4,603	5,450	1,239	721	10,491	21,100	23,390	80.3	72.0	5,168	2,730	1,730	4,946
Delaware, Lakawanna & Western	July	927	4,526	784	6,025	6,441	735	823	169	1,119	1,054	354	180	3,335	5,744	6,072	80.5	94.3	281	640	—474	—321
	7 mos.	927	33,357	5,532	44,845	49,862	5,099	5,539	1,201	7,485	7,321	2,484	1,303	23,782	40,348	42,833	90.0	85.9	4,497	4,615	—1,474	1,595
Denver & Rio Grande Western	July	2,155	5,477	363	6,077	6,903	806	1,151	71	926	1,070	320	234	2,022	4,326	4,858	71.2	70.4	1,751	877	802	1,050
	7 mos.	2,155	37,414	1,652	40,471	48,199	4,986	6,060	609	6,384	7,370	2,218	1,602	13,178	28,267	31,418	69.8	65.2	12,204	6,253	5,960	8,957
Detroit & Toledo Shore Line	July	50	412	....	437	546	48	75	4	63	98	24	19	193	340	419	77.8	76.9	97	19	—5	12
	7 mos.	50	3,645	....	3,922	4,719	439	570	25	496	569	168	144	1,493	2,696	2,929	68.7	62.1	1,226	421	188	398
Detroit, Toledo & Ironton	July	464	1,287	....	1,339	1,819	184	272	27	284	376	132	51	424	1,038	1,281	77.5	70.4	301	104	203	284
	7 mos.	464	9,081	....	9,421	13,214	1,438	1,835	199	2,427	2,900	915	392	3,049	7,944	9,251	84.3	70.0	1,476	741	932	2,102
Duluth, Missabe & Iron Range	July	562	5,535	3	6,485	8,586	506	583	68	599	785	190	12	1,448	2,823	3,785	43.5	44.1	3,663	450	3,142	2,002
	7 mos.	562	14,059	7	16,480	30,292	3,483	3,595	728	4,405	5,462	1,244	89	6,451	16,078	20,418	97.6	67.4	402	1,560	—1,161	4,101
Duluth, So. Shore & Atlantic	July	544	608	2	665	671	115	170	11	92	147	26	33	230	495	643	74.4	95.7	170	34	124	—36
	7 mos.	544	3,484	16	3,699	4,532	732	961	74	708	1,060	194	227	1,438	3,289	4,121	88.9	90.9	410	231	128	4
Duluth, Winnipeg & Pacific	July	175	420	1	427	697	92	79	5	66	64	1	7	180	356	339	83.4	48.6	71	39	—32	223
	7 mos.	175	3,409	5	3,453	3,710	561	447	36	432	408	8	49	1,239	2,351	2,228	68.0	60.1	1,102	283	238	526

REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1958

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total (inc. misc.) 1958	Total (inc. misc.) 1957	Operating Expenses: Maint. Way and Structures: Total 1958	Total 1957	Deprec. and Retirements	Maint. Equipment: Total 1958	Total 1957	Deprec. and Retirements	Traffic	Transportation	Total 1958	Total 1957	Operating ratio 1958	Operating ratio 1957	Net from railway operation	Railway tax accruals	Net Railway operating income 1958	Net Railway operating income 1957
Elgin, Joliet & Eastern	July	236	2,422	....	3,261	4,427	251	336	27	719	1,084	122	43	1,221	2,546	3,470	78.1	78.4	715	287	422	189
	7 mos.	236	17,672	....	23,965	34,053	1,759	2,105	194	7,394	6,719	870	306	9,058	20,740	23,320	89.9	68.5	2,325	2,062	—230	2,732
Erie	July	2,207	10,273	623	11,845	13,979	1,369	2,108	216	2,017	2,221	557	359	6,177	10,676	12,411	79.3	88.8	1,170	1,149	—782	262
	7 mos.	2,207	74,838	3,852	86,201	100,699	9,466	12,733	1,528	13,696	16,096	3,899	2,586	42,299	73,405	83,690	85.2	83.1	12,796	7,733	—927	5,734
Florida East Coast	July	571	1,746	320	2,235	2,532	364	360	48	466	452	117	85	1,011	2,083	2,102	93.2	83.0	152	202	—211	40
	7 mos.	571	16,222	3,071	21,000	24,314	2,842	3,501	324	3,823	4,231	809	618	8,029	16,482	18,598	78.5	76.5	4,519	1,478	1,385	2,104
Georgia Railroad	July	321	520	20	622	641	87	135	8	106	122	35	38	298	566	655	91.0	102.3	56	36	48	—13
	7 mos.	321	3,752	107	4,434	4,904	597	878	57	768	970	241	279	2,039	3,955	4,570	89.2	93.2	479	252	382	370
Georgia & Florida	July	332	258	....	263	276	64	68	4	34	34	8	22	82	220	227	83.5	82.1	43	16	5	10
	7 mos.	332	1,814	....	1,852	1,945	519	500	26	248	273	56	156	571	1,621	1,691	87.5	86.9	232	116	—32	—11
Grand Trunk Western	July	951	3,258	253	3,851	4,594	742	811	58	748	861	91	92	2,274	4,083	4,630	106.0	100.8	—232	356	—1,168	—920
	7 mos.	951	27,388	1,411	31,212	35,225	4,920	4,897	407	5,965	6,594	640	653	16,142	29,223	31,511	93.6	89.5	1,989	2,507	—4,452	—2,554
Great Northern	July	8,275	18,618	1,278	21,552	26,018	4,215	5,161	357	3,675	4,107	858	625	7,915	17,397	19,752	80.7	75.9	4,155	1,971	1,915	2,387
	7 mos.	8,274	114,982	5,787	129,770	156,727	21,445	28,909	2,087	27,167	27,976	5,844	3,902	49,801	109,467	122,510	84.4	78.2	20,303	12,156	6,832	12,517
Green Bay & Western	July	224	351	....	366	396	100	63	5	33	44	9	25	128	310	274	84.8	69.2	56	34	—1	26
	7 mos.	224	2,640	....	2,707	2,651	510	433	32	346	343	64	175	829	2,039	1,911	75.3	72.1	668	289	182	179
Gulf Mobile & Ohio	July	2,757	5,936	308	6,636	6,760	940	987	84	1,223	1,567	301	302	2,391	5,244	5,677	79.0	84.0	1,392	499	501	186
	7 mos.	2,757	40,543	1,888	45,435	49,184	6,378	7,536	548	9,485	10,305	2,087	2,110	16,321	37,000	39,438	81.4	80.2	8,436	3,554	2,146	2,646
Illinois Central	July	6,497	17,013	1,890	20,955	23,346	3,219	3,940	403	3,764	4,105	948	589	8,512	17,192	18,936	82.0	81.1	3,763	2,009	1,212	1,344
	7 mos.	6,497	121,183	12,100	148,061	168,343	21,136	27,012	2,896	28,240	32,203	6,685	4,331	59,996	121,459	134,428	82.0	79.9	26,603	14,364	9,108	11,077
Illinois Terminal	July	334	860	....	1,015	1,086	123	162	12	147	177	31	48	362	739	858	72.9	78.9	275	89	84	91
	7 mos.	338	5,568	131	6,599	7,298	770	940	82	986	1,433	215	345	2,480	5,002	5,840	75.8	80.0	1,597	555	500	453
Kansas City Southern	July	891	2,875	100	3,320	3,613	249	336	47	410	475	106	89	1,074	1,951	2,228	58.8	61.7	1,368	601	610	642
	7 mos.	891	21,954	523	24,739	26,618	1,927	2,258	336	3,376	3,407	742	670	7,783	14,687	15,416	59.4	57.9	10,051	4,289	4,293	4,638
Kansas, Oklahoma & Gulf	July	327	389	....	392	407	73	63	7	29	39	1 2	32	97	260	266	66.4	65.3	132	50	49	54
	7 mos.	327	3,007	....	3,017	2,926	475	474	50	194	220	83	212	668	1,741	1,771	57.7	60.5	1,276	549	472	415
Lake Superior & Ishpeming	July	160	460	....	562	784	77	80	11	55	94	21	2	122	275	349	49.0	44.6	286	44	249	205
	7 mos.	160	1,467	....	1,772	2,771	414	399	80	482	583	149	14	542	1,590	1,821	89.7	65.7	183	228	47	503
Lehigh & Hudson River	July	96	245	....	246	280	37	41	3	31	43	8	17	98	198	220	80.5	78.4	48	19	—4	4
	7 mos.	96	1,847	....	1,849	2,117	240	262	17	259	283	58	127	744	1,474	1,501	79.7	70.9	375	139	—38	95
Lehigh & New England	July	177	550	....	556	286	66	39	6	149	128	52	24	218	510	377	91.7	131.9	46	35	125	9
	7 mos.	178	3,703	....	3,745	4,077	442	564	46	938	1,233	360	171	1,458	3,350	3,766	89.5	92.4	395	232	815	1,072
Lehigh Valley	July	1,131	3,969	263	4,474	5,480	538	840	98	820	998	216	141	2,592	4,322	5,022	96.6	91.6	151	444	—589	—196
	7 mos.	1,130	29,301	1,601	32,718	39,434	4,469	4,968	698	5,796	7,688	1,404	1,039	17,635	30,632	34,630	93.6	87.8	2,086	3,078	—3,175	232
Long Island	July	350	1,124	4,622	5,901	5,856	782	715	92	1,064	1,061	168	35	2,862	4,939	4,701	85.7	80.3	962	343	401	556
	7 mos.	350	7,285	30,543	39,047	38,384	5,632	5,429	699	7,739	7,409	1,177	217	19,914	34,886	33,239	89.3	86.6	4,161	2,460	284	976
Louisiana & Arkansas	July	746	1,703	43	1,839	2,219	169	213	44	273	320	98	75	653	1,251	1,398	68.0	63.0	588	247	204	324
	7 mos.	746	12,840	289	13,869	15,624	1,370	1,536	196	2,080	2,263	689	553	4,683	9,230	9,699	66.5	62.1	4,640	2,040	1,622	2,362
Louisville & Nashville	July	5,697	15,426	887	17,657	19,819	2,709	2,987	284	3,664	4,442	1,094	480	7,659	15,421	17,196	87.3	86.8	2,237	1,754	1,123	1,776
	7 mos.	5,697	112,129	4,979	126,853	141,859	19,063	21,629	2,028	27,178	31,638	7,531	3,515	53,205	109,611	118,671	86.4	83.7	17,242	13,321	8,749	14,567
Maine Central	July	944	1,638	100	1,863	1,676	383	476	28	316	368	84	24	771	1,615	1,786	86.7	100.6	248	146	72	—36
	7 mos.	944	13,856	494	15,260	16,356	2,676	3,105	193	2,695	2,892	589	186	5,779	12,149	12,996	79.6	79.5	3,111	1,427	1,085	1,273
Minneapolis & St. Louis	July	1,391	1,827	6	1,897	1,904	333	285	32	315	244	90	105	639	1,525	1,372	80.4	72.1	372	216	159	223
	7 mos.	1,391	12,226	14	12,699	13,359	1,964	1,907	215	2,082	1,945	633	775	4,386	10,101	10,014	79.5	75.0	2,598	1,612	914	1,163
Minn., Northfield & Southern	July	77	338	....	359	381	26	116	2	41	32	13	32	88	225	290	62.9	76.2	133	70	53	28
	7 mos.	77	2,421	....	2,553	2,831	151	400	16	277	244	89	208	593	1,475	1,655	57.8	58.4	1,078	594	426	462
Minn., St. Paul & S. S. Marie	July	3,222	3,034	109	3,346	4,341	752	1,149	49	525	660	135	108	1,409	3,000	3,602	89.9	83.0	338	288	—91	185
	7 mos.	3,222	21,330	454	23,111	27,048	4,737	5,457	342	4,684	5,031	964	748	9,533	21,103	22,127	91.3	81.8	2,007	1,867	—227	1,661
Missouri-Illinois	July	172	385	....	388	539	90	53	4	84	86	37	13	123	323	293	83.2	54.4	65	62	46	119
	7 mos.	172	2,703	....	2,722	3,358	483	360	27	619	601	260	92	775	2,052	1,963	75.4	58.5	670	518	432	710
Missouri-Kansas-Texas Lines	July	2,919	4,708	130	5,325	6,062	451	991	47	1,042	1,121	261	187	1,926	3,908	4,890	73.4	80.7	1,417	364	372	328
	7 mos.	3,047	31,048	772	35,203	40,676	3,693	6,935	616	6,498	7,196	1,797	1,366	13,047	26,429	33,356	75.1	72.0	8,773	2,545	2,433	1,420
Missouri Pacific	July	9,529	21,504	1,138	24,903	26,843	4,031	3,815	308	4,251	4,073	1,059	689	9,669	19,640	19,355	78.9	72.1	5,263	1,676	2,517	3,717
	7 mos.	9,556	145,608	5,930	166,536	175,011	25,434	27,268	2,162	29,271	30,999	7,332	4,765	64,357	130,811	135,096	78.5	77.2	35,725	10,182	17,407	20,721
Monon	July	541	1,370	63	1,557	1,888	243	281	28	285	327	78	100	692	1,412	1,574	90.7	83.4	145	25	51	109
	7 mos.	541	10,063	372	11,275	12,983	1,489	1,884	155	1,979	2,175	549	704	4,757	9,615	10,802	85.3	83.2	1,659	557	524	692
Monongahela	July	177	215	....	218	409	68	77	8	51	65	11	1	121	248	351	113.9	85.9	—30	18	—120	—101
	7 mos.	177	2,645	....	2,667	3,630	462	541	82	392	440	78	7	1,095	2,046	2,500	76.7	68.9	621	171	—333	—94
New York Central	July	10,521	36,871	6,729	50,728	59,143	5,665	8,407	1,301	9,700	8,748	2,526	915	26,097	45,338	49,566	89.4	83.8	5,389	5,054	—1,411	2,339
	7 mos.	10,521	271,118	44,874	365,910	438,931	41,661	51,172	8,508	66,700	76,008	17,621	7,232	186,829	323,385	366,200	88.4	83.4	42,524	38,429	—9,298	21,754
Pittsburgh & Lake Erie	July	221	2,400	45	2,557	3,662	421	651	43	834	1,105	308	48	915	2,401	3,266	93.9	89.2	155	206	777	823
	7 mos.	221	16,050	288	17,082	26,577	3,042	4,098	301	6,201	7,611	2,100	539	7,291	18,580	23,156	108.8	87.1	—1,498	1,364	3,322	5,668
New York, Chicago & St. Louis	July	2,179	10,345	179	10,975	13,821	1,289	1,780	158	1,768	2,454	459	356	4,630	8,524	10,462	77.7	75.7	2,451	1,092	853	1,282
	7 mos.	2,179	74,295	934	77,756	100,322	9,088	11,545	1,362	13,483	17,517	3,107	2,497	31,687	60,109	72,604	77.3	72.4	17,647	7,986	6,523	10,752
New York, New Haven & Hartford	July	1,762	6,146	4,474	12,081	12,830	1,501	1,584	275	1,905	2,054	488	211	5,934	10,452	11,931	86.5	86.0	1,628	988	—685	—603
	7 mos.	1,762	45,014	29,222	85,188	95,302	10,354	11,290	1,908	13,585	15,426	3,444	1,582	41,546	73,468	78,210	86.2	82.1	11,720	6,013	—3,933	666
New York Connecting	July	21	238	....	253	281	138	119	25	14	15	....	....	82	238	213	93.8	75.9	16	92	—96	—14
	7 mos.	21	2,025	....	2,163	2,281	786	685	177	118	124	....	....	618	1,549	1,455	71.6	63.8	615	624	—157	139
New York, Susque. & Western	July	106	265	23	303	341	38	42	6	51	59	11	6	173	297	338	97.9	99.1	6	29	—57	—64
	7 mos.	106	2,113	205	2,409	3,010	272	316	42	388	408	81	47	1,256	2,170	2,477	90.1	82.3	239	213	—249	—7

(Concluded on next page)

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REVENUES AND EXPENSES OF RAILWAYS

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

MONTH OF JULY AND SEVEN MONTHS OF CALENDAR YEAR 1958

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Operating Revenues: Pass.	Operating Revenues: Total (inc. misc.) 1958	Operating Revenues: Total (inc. misc.) 1957	Operating Expenses: Maint. of Way and Structures: Total 1958	Maint. of Way and Structures: Total 1957	Maint. of Way and Structures: Deprec. and Retirements	Maint. Equipment: Total 1958	Maint. Equipment: Total 1957	Maint. Equipment: Deprec. and Retirements	Traffic	Transportation	Total 1958	Total 1957	Operating ratio 1958	Operating ratio 1957	Net from railway operation	Railway tax accruals	Net Railway operating income 1958	Net Railway operating income 1957
Norfolk & Western	July	2,128	13,714	297	14,793	19,667	1,859	2,882	324	2,577	4,060	1,039	359	4,614	10,056	14,097	68.0	71.7	4,737	2,140	3,085	2,970
	7 mos.	2,131	106,280	1,672	113,691	148,374	15,576	20,292	2,263	23,913	29,940	7,226	2,523	35,638	82,758	102,478	72.8	69.1	30,933	16,377	17,447	23,703
Norfolk Southern	July	604	723	....	734	799	192	234	14	120	140	33	48	251	665	756	90.6	94.6	69	48	1	—2
	7 mos.	604	4,917	....	5,014	6,306	1,245	1,436	104	870	927	233	340	1,707	4,547	5,106	90.7	81.0	467	332	—68	438
Northern Pacific	July	6,828	13,306	855	15,300	15,948	2,218	2,496	274	2,501	2,849	725	380	5,712	11,760	12,980	76.9	81.4	3,541	1,670	2,102	1,496
	7 mos.	6,828	83,698	3,531	95,665	104,119	13,508	16,222	2,053	19,335	20,043	4,997	2,861	39,148	81,325	88,350	85.0	84.9	14,340	10,444	6,248	7,553
Northwestern Pacific	July	328	1,042	4	1,059	1,110	213	241	17	78	90	3	6	334	657	726	62.1	65.4	402	135	93	58
	7 mos.	329	6,472	18	6,557	7,127	1,839	1,747	129	538	656	18	54	2,222	4,837	4,933	73.8	69.2	1,720	410	135	382
Pacific Electric	July	358	953	....	1,098	1,250	181	289	24	60	56	3	23	518	892	1,023	81.2	81.9	206	99	—2	—26
	7 mos.	362	6,392	....	7,324	8,883	1,209	1,342	171	428	446	24	137	3,541	6,119	7,036	83.6	79.2	1,205	752	—343	41
Pennsylvania	July	9,940	45,855	9,495	63,136	81,509	7,193	9,790	1,430	12,553	16,628	2,992	1,210	31,514	56,593	68,941	89.6	84.6	6,542	5,345	—2,620	3,262
	7 mos.	9,944	352,937	62,379	469,739	583,494	53,920	66,456	9,956	96,116	120,145	20,983	8,516	232,232	419,013	490,926	89.2	84.1	50,726	36,148	—9,966	28,973
Penn.-Reading Seashore Lines	July	358	577	228	825	935	221	201	29	106	111	27	10	512	893	915	108.3	97.8	—68	71	—317	—246
	7 mos.	358	3,772	716	4,628	5,447	1,482	1,541	186	846	819	187	66	3,361	6,064	6,302	131.0	115.7	—1,436	473	—2,961	—2,718
Piedmont & Northern	July	126	328	....	338	343	49	50	8	30	29	9	29	81	222	225	65.7	65.5	116	48	29	25
	7 mos.	126	2,776	....	2,846	3,031	330	320	44	194	217	63	199	572	1,526	1,533	53.6	50.6	1,321	648	373	445
Pittsburgh & West Virginia	July	132	526	....	533	872	150	139	29	150	106	46	73	209	636	595	119.4	68.3	—103	Cr.77	—22	143
	7 mos.	132	4,556	....	4,601	5,925	934	853	176	1,034	973	326	545	1,483	4,392	4,261	95.5	71.9	209	Cr.41	272	953
Reading	July	1,303	6,508	471	7,475	10,169	1,039	1,724	185	1,437	1,751	494	187	3,803	6,936	8,796	90.5	86.5	539	Cr.267	394	1,131
	7 mos.	1,304	53,107	3,839	61,070	81,181	8,775	10,825	1,362	11,387	15,234	3,450	1,381	28,862	53,728	64,092	88.0	79.8	7,342	1,166	3,903	9,265
Richmond, Fred. & Potomac	July	118	1,152	481	1,849	2,062	140	239	27	266	352	67	29	730	1,318	1,526	71.3	74.0	531	513	149	151
	7 mos.	118	8,803	3,115	13,737	16,318	1,187	1,608	189	1,984	2,322	471	222	5,153	9,630	10,609	70.1	65.0	4,107	2,284	1,127	1,913
Rutland	July	391	333	....	359	380	80	88	8	46	62	17	32	157	341	370	95.0	97.4	18	28	—10	—25
	7 mos.	391	2,461	....	2,631	3,016	491	608	59	412	425	123	223	1,101	2,414	2,595	91.8	86.0	217	196	—11	140
St. Louis-San Francisco	July	4,593	8,622	314	9,613	10,394	1,517	1,388	—111	1,541	1,761	610	332	3,887	7,869	8,461	81.9	81.4	1,744	754	921	960
	7 mos.	4,593	56,988	1,777	63,539	69,296	8,971	9,742	1,179	10,922	11,664	4,274	2,422	26,617	53,075	57,111	83.5	82.4	10,464	4,201	5,453	6,134
St. Louis-San Francisco & Texas	July	143	496	2	435	365	51	49	7	21	30	1	23	148	255	298	58.5	81.6	180	73	54	—7
	7 mos.	143	2,395	16	2,582	2,681	319	292	5	174	218	8	169	1,045	1,791	1,963	69.4	73.2	791	249	134	84
St. Louis Southwestern Lines	July	1,556	4,694	9	4,795	5,788	686	681	75	663	775	184	186	1,611	3,323	3,557	69.3	61.5	1,472	527	737	921
	7 mos.	1,558	33,400	48	34,153	38,638	4,805	5,028	503	4,789	5,283	1,283	1,335	11,385	23,567	25,081	69.1	64.9	10,585	4,035	4,938	5,540
Savannah & Atlanta	July	144	274	....	284	306	50	103	2	56	59	19	16	104	237	283	83.5	92.5	47	19	23	22
	7 mos.	144	2,109	1	2,184	2,321	429	481	11	402	392	135	112	709	1,740	1,769	79.7	76.2	444	149	265	351
Seaboard Air Line	July	4,146	9,404	1,297	11,528	12,118	1,788	1,709	199	2,529	2,488	703	445	4,553	10,012	9,776	86.8	80.7	1,517	355	1,259	1,462
	7 mos.	4,121	75,299	7,705	89,644	98,061	12,756	14,099	1,427	18,032	18,065	4,849	3,128	33,102	71,857	73,574	80.2	75.0	17,787	6,295	10,280	12,735
Southern Railway	July	6,273	17,013	1,110	19,534	20,079	3,277	3,068	293	3,585	4,247	944	475	7,083	15,697	16,409	80.4	81.7	3,837	975	2,443	2,330
	7 mos.	6,273	125,520	6,661	143,001	155,952	20,998	21,434	2,088	24,860	28,563	6,590	3,396	48,535	106,395	112,259	74.4	72.0	36,606	12,461	20,249	22,772
Alabama Great Southern	July	328	772	56	956	1,499	248	264	34	383	332	81	41	476	1,257	1,316	131.5	87.8	—301	93	—433	33
	7 mos.	328	7,505	304	8,686	10,927	1,711	1,865	244	2,144	2,316	565	288	3,293	8,193	8,850	94.3	81.0	493	670	—304	1,044
Cinn., New Orleans & Tex. Pac.	July	337	2,406	121	2,693	3,219	613	523	66	684	753	219	82	899	2,482	2,528	92.2	78.5	211	260	21	482
	7 mos.	337	19,077	684	21,119	24,907	4,181	3,994	520	4,690	4,765	1,480	582	6,081	16,910	17,155	80.1	68.9	4,208	1,928	3,056	4,599
Georgia Southern & Florida	July	397	619	53	733	709	159	224	10	89	79	11	21	262	592	656	80.8	92.6	141	39	—72	—107
	7 mos.	397	4,626	315	5,415	5,614	1,117	1,474	136	562	586	74	154	1,893	4,146	4,645	76.6	82.7	1,269	268	—273	—453
New Orleans & Northeastern	July	203	941	42	1,047	1,103	181	253	22	397	171	77	24	268	944	787	90.2	71.4	103	66	51	107
	7 mos.	203	6,064	226	6,765	7,289	1,278	1,379	143	1,386	1,162	455	173	1,680	5,029	4,950	74.3	67.9	1,736	990	718	836
Southern Pacific	July	8,083	39,599	3,339	45,855	47,044	5,554	5,826	460	9,692	10,389	2,442	776	18,227	36,469	38,810	79.5	82.5	9,385	4,088	3,972	3,619
	7 mos.	8,091	254,478	16,783	288,126	302,906	35,856	37,922	3,591	63,689	67,989	16,715	5,671	113,848	233,930	249,064	81.2	82.2	54,196	25,088	25,508	25,401
Texas & New Orleans	July	4,283	10,360	397	11,393	11,973	1,927	2,069	318	1,630	1,491	183	251	4,264	8,676	8,946	76.2	74.7	2,717	1,033	576	724
	7 mos.	4,283	71,181	2,117	77,816	81,348	12,973	13,895	1,333	11,048	10,456	1,286	1,810	29,292	59,286	60,647	76.2	74.6	18,531	7,248	3,403	4,806
Spokane International	July	150	285	....	294	306	63	59	5	29	37	10	6	79	191	199	65.1	65.1	102	22	59	57
	7 mos.	150	2,261	....	2,322	2,206	434	413	26	230	221	70	44	587	1,400	1,326	60.3	60.1	922	344	395	428
Spokane, Portland & Seattle	July	936	2,538	120	2,809	2,480	478	449	87	439	465	128	36	983	2,059	2,145	73.3	86.5	750	238	390	—16
	7 mos.	943	16,158	555	17,871	18,135	3,113	2,867	460	3,164	3,061	897	242	6,694	14,060	13,829	78.7	76.3	3,811	1,600	1,889	1,848
Tennessee Central	July	286	309	1	326	386	32	65	5	47	66	22	17	116	238	305	73.1	78.9	88	24	29	8
	7 mos.	286	2,195	3	2,291	2,570	298	507	37	340	448	156	128	791	1,741	2,137	76.0	83.2	550	159	113	—18
Texas & Pacific	July	1,831	4,734	426	5,709	6,532	830	913	94	1,056	1,238	269	199	2,473	4,912	5,296	86.0	81.1	798	206	270	362
	7 mos.	1,831	35,755	2,027	41,749	46,458	5,752	7,046	673	7,488	7,855	1,866	1,387	16,891	33,958	36,154	81.3	77.8	7,791	2,915	1,757	3,446
Texas Mexican	July	161	320	....	363	379	60	54	6	37	33	11	12	181	233	227	64.2	60.0	130	58	41	42
	7 mos.	161	2,113	....	2,293	2,120	400	382	40	236	213	74	86	579	1,450	1,399	63.2	66.0	844	381	250	176
Toledo, Peoria & Western	July	239	563	....	675	605	75	86	6	47	54	12	48	151	360	391	62.5	64.5	146	5	146	69
	7 mos.	239	4,150	....	4,259	4,393	523	474	42	386	378	84	352	1,085	2,633	2,634	61.8	59.9	1,625	628	559	532
Union Pacific	July	9,748	36,763	3,526	43,456	42,545	6,279	5,028	677	7,991	7,670	1,867	1,088	15,293	33,132	31,719	76.2	74.6	10,324	5,222	2,911	2,835
	7 mos.	9,752	234,623	16,006	270,268	289,444	37,710	40,983	4,945	51,967	56,365	13,111	8,505	95,453	208,880	222,910	77.3	77.0	61,388	34,395	16,880	17,531
Virginian	July	608	2,745	....	2,903	4,735	393	594	54	570	750	286	60	720	1,874	2,500	64.6	52.8	1,029	489	670	1,264
	7 mos.	608	27,096	....	28,325	38,188	3,153	3,930	446	4,918	4,929	1,971	415	5,764	15,144	16,983	53.5	44.5	13,182	6,572	7,441	11,591
Wabash	July	2,392	7,958	431	9,177	10,563	1,171	1,283	131	1,424	1,544	451	343	4,358	7,757	8,343	84.5	79.0	1,420	299	391	817
	7 mos.	2,392	55,034	2,564	63,160	72,427	7,547	8,217	618	10,052	10,560	3,145	2,465	29,395	52,521	56,070	83.2	77.4	10,639	3,624	2,272	5,715
Ann Arbor	July	294	697	....	738	781	87	102	7	147	172	42	33	363	658	711	89.2	91.1	79	30	36	21
	7 mos.	294	4,880	....	4,966	5,494	540	670	46	1,093	1,151	293	227	2,474	4,498	4,698	90.6	85.5	468	342	31	234
Western Maryland	July	844	3,085	....	3,211	3,877	444	533	52	724	780	284	111	1,171	2,654	3,020	82.7	77.9	557	303	576	803
	7 mos.	845	24,079	....	25,424	32,483	3,588	4,187	416	5,336	5,659	1,938	828	8,601	19,945	22,556	78.5	69.4	5,479	2,673	4,498	7,062
Western Pacific	July	1,192	3,865	321	4,306	4,631	576	667	76	677	659	217	200	1,548	3,296	3,552	76.6	76.7	1,010	291	618	566
	7 mos.	1,192	26,189	1,442	28,372	31,906	4,108	4,784	553	4,732	4,518	1,511	1,511	10,403	22,756	23,490	80.2	73.6	5,615	2,023	3,165	4,389
Wisconsin Central	July	1,031	2,499	54	2,740	2,987	334	489	44	384	474	106	95	1,139	2,105	2,405	76.8	80.5	635	176	256	291
	7 mos.	1,031	16,781	238	18,072	19,957	2,410	3,281	304	3,209	3,336	725	657	7,930	15,255	16,432	84.4	82.3	2,817	1,289	411	1,086

(*Continued from page 25*)

train is stopped. A crew member is instructed to inspect the indicated journal and report back by telephone to the operator. As one man put it, "It's remarkable how many times the crew walked back, said, 'We don't think there's a hot box, but we'll look anyway,' then lifted the lid to find that the car had to be set out."

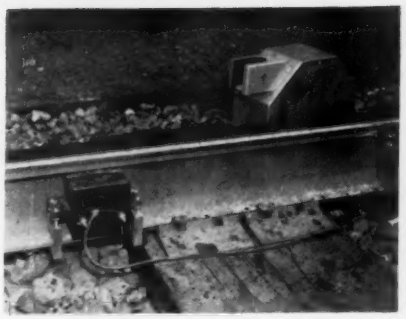
Most everyone agrees that hot box detection is economically justified. The Reading estimates that because the detector reveals an overheated journal before it becomes a hot box, there are savings of approximtaely $300 per axle, when no wheel change is required. In addition, the Reading points out, the system detects overheated journals early, thereby minimizing journal and axle cuts and preventing possible derailments.

The B&M reports considerable time savings in car set-offs since installation of detectors at Ayer, Mass. The Reading reports that because the detector system is able to reveal an overheated journal prior to a journal cut—in which case the cars are set out and repairs made in the field—they save at least three days when the car does not have to be sent to the shop. One railroad has sharply reduced the number of daily set-outs formerly experienced on a 330-mile length of its main line. For six months before the hot box detector was installed, as many as 25 daily set-outs were required because of hot boxes. For the six months after the detector was placed in service, the number of daily set-outs averaged two. Setouts were reduced because the detector often picks up journals in their early heating. Thus, the crew is able to make the minor repair or repack the journal without setting out the car.

Cuts Inspection Time

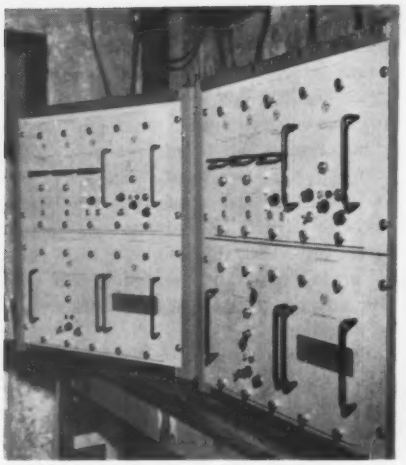
The fact that the detector accurately locates a hot box materially reduces the time a train is held up on the main line while the crew inspects the car and decides whether to set it off or repack the journal. Some roads have reduced materially the time required to inspect trains in yards, particularly if they have detectors which check the trains as they approach the yards. One road makes it standard practice now, where incoming trains are checked by hot box detectors, for inspectors to give attenion only to those indicated abnormally hot by the detector.

What are the basic requirements for detector location? They must be placed so that once a train with a hot box has passed the installation, an employee can control a signal on the wayside to indicate to the train crew that the train should be stopped. A telephone should be at the stop point so the train crew can call in to the interlocking operator or CTC dispatcher. The latter will by then have read the pen-graph recording of the indications and can tell the crew which journal is overheated.



HOT BOX DETECTOR head is mounted outside rail. Transducer (black metal box) works with a twin unit to control shutter on detector to view only the passing journal.

NEW RECORDER developed by Servo Corp. of America features take-up reel for the recording tape. All controls are mounted on the front panel for easy operation.



AMPLIFIERS receive signal from detector head, amplify it and feed it into the pen-graph recorder. Two amplifiers shown serve double-direction hot box detectors.

B&O has an installation at Hancock, W. Va., with the detectors 500 ft from the tower in which the recorder is located. This detector location is 8.7 miles in approach to Miller's interlocking, where the train can be stopped by the operator for inspection by the crew. Thus, the Hancock interlocking operator, seeing a hot box indication on the recorder, telephones the Miller's interlocking operator to stop the train for inspection.

At the B&M Ayer installation, the detectors are two miles in approach to an interlocking. The recorders are in the interlocking tower, where the operator, noting that a hot box is indicated, can set signals to stop the train. The NYC has similar installations of detectors at Angola, N.Y., and Dock Junction, Pa., with recorders in the dispatcher's office in Erie. The information is telemetered into Erie, 64 miles from Angola and 6 miles from Dock Junction. The dispatcher at Toledo, Ohio, receives journal readings from hot box detectors at Wauseon, Ohio, 32 miles distant, and Brimfield, Ind., 97 miles away. In these installations the trains are operating in CTC territory and the dispatcher can, if necessary, put the train into work sidings after it has passed the detector. Or he can route trains into nearby yards where car inspectors are located. The Reading also has its hot box detectors at interlockings, and the operator is able to control signals six miles away to stop trains. In all these instances, the trains are stopped by direct or remote controlled signals.

The C&O and one other railroad use a flashing lunar-white signal aspect to indicate to train crews that they are to stop and telephone to learn which journal box is hot. This special C&O signal is controlled from an interlocking.

Most roads seem to agree it is desirable to have the detector placed so that when a train is stopped for inspection the car with a hot box is convenient to a siding. Detectors, many railroads believe, should be located approximately 30 miles in approach to a yard where the freight train can be inspected.

Thus, the detector will catch or pinpoint hot boxes for trains inbound to yards, and these can be given attention by car inspectors.

This does not eliminate the need for stopping the train and inspecting any hot journal, because the car might have to be set out. But it can help in the in-

spection of the train when it arrives at the yard.

One belief is that perhaps the best location for hot box detectors in approach to yards is only 3 to 5 miles out. When a hot box is indicated, the train pulls into the yard where the hot journal is looked at by car inspectors. Thus, the car with the hot journal does not have to be set out along the line. The time saved by having the train checked in the yard, and not setting cars out, is estimated to be considerable.

Detectors should also be installed 30 miles from a yard to check outbound trains. Experience has indicated that, if a journal is going to heat up after standing in a yard, it will do so in the first 30 miles of running. Some feel that an additional installation should be made another 20 miles on, that is 50 miles from the yard. The second detector would catch journals that might be "warming up" but had not reached the critical stage when they passed the detectors 30 miles out.

Does the recorder have to be at the same location as the detector? In the beginning, this was considered to be essential. The belief may have deterred some roads from installing detectors, as they felt they could not justify an installation economically if they had to put someone out by the detector to ready the pen-graph recorder.

The New York Central is telemetering hot box information from the detector heads to recorders in the dispatchers' offices. As indicated earlier, the Toledo, Ohio, dispatcher receives indications from a detector 97 miles west, at Brimfield, Ind. Servo Corp. is now in the testing stage for telemetering hot box indications to the recorder. Thus, it appears, for all practical purposes, that detector heads can be any distance from the recorder that is necessary. NYC experience has been that it is of tremendous advantage to have recorders at the same location as the signal control.

Analysis of the experience of the nine railroads with detectors indicates the future is bright for hot box detection. A large number of hot box detectors are on order or are scheduled to be ordered by several of the roads for future installation.

The New York Central plans to install hot box detectors on all its operating districts. The C&O plans to install a hot box detector near Clifton Forge, Va., which will check every tonnage train approaching the yard. The B&M is contemplating two more installations—one at Wells Beach, Maine, another at North Adams, Mass. Most of the other roads in the survey plan further hot box installations, although the plans are not yet definite. One road has ordered a large number of hot box detectors and is planning to put them in approaches to all its major yards.

The efficiency of the modern signal system and the diesel locomotive has satisfied the demand for higher speeds and longer non-stop runs. Installations for automatically detecting and locating hot boxes appear to be an economic necessity, as part of the modern signal system.

Railroading After Hours with Jim Lyne

LOWER PENSION TAX?—R. J. Stauffer, a Reading employee, says he agrees with JWV of Cleveland (whom I quoted here), to the effect that railroaders should be put under Social Security, since Railroad Retirement costs too much in proportion to benefits. When the price of SS to the employee was 1 per cent, railroad employees were paying up to 5 per cent; and now the comparison is 6½ per cent with 2 per cent, says RJS.

Mr. Stauffer believes SS should take over railroad pensions—with railroad employees getting a refund of their payments in excess of the rate of SS deductions. He believes the tax rate on railroaders should be reduced to the SS level, not vice versa.

There is so much heat on this subject and so little fact-finding. Unhappily for both railroads and employees, inaction isn't improving conditions perceptibly.

WHY "DINGER"?—Safety Supervisor W. E. Story of the Santa Fe wants to know "why yardmasters are called 'dingers'." I don't like to confess my ignorance (perhaps because I have such a heavy burden of it), but I'll have to admit that this term is a new one on me.

I asked one of my associates who knows his way around railroads pretty well and he said: "I have heard yardmasters called a lot of things, but not this one." Can anybody shed light on this weighty matter?

UNFINISHED BUSINESS—There is a lot of useful and interesting information hidden away in testimony before Congressional committees and regulatory bodies. I was referring the other day to the report of testimony before the Smathers committee—to re-read the statement of ICC Chairman Howard Freas—and I tumbled onto a reprint of the report of the Sharpe Adjustment Board of 1954. This was the board which made the following recommendation:

"There should be established a commission to review and modernize the wage structure as a whole of the operating classifications in the railroad industry."

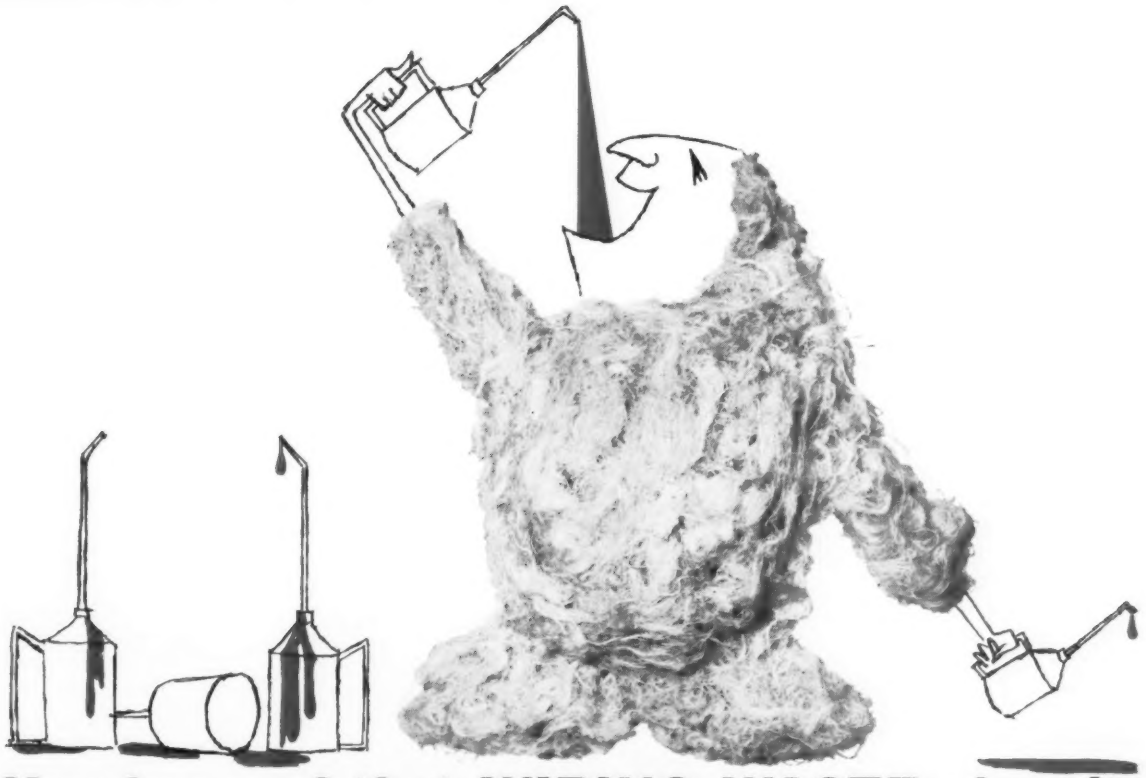
The report went on to say that such an inquiry is "long overdue" and is essential to "constructive industrial relations."

EMPLOYEES UNDER SOCIALISM—Switchman Guy Pollard, Jr., of Springfield, Mo.—whom I quoted here a couple of weeks ago—thinks I may have given an erroneous impression of his personal opinion of government ownership of railroads. Mr. Pollard is strictly anti-socialist, and in favor of "free enterprise and healthier railroads under independent management." He said, however, that many of his fellow-employees expect government ownership; and that they aren't much worried. But Mr. Pollard doesn't share this complacency.

It might be a good thing for both the railroads and their employees if a few U.S. railroad employees were to look around Europe (for instance) a little, to see how railroad employees fare under government ownership. I've been to Europe only once, and that was a long time ago—but I've never seen or heard or read anything to suggest that railroad employees fare better over there under socialization than employees do on privately owned railroads in America.

Even in this country, it is private industry—not government—which usually leads the way in improving living standards of employees.

POPULARITY REGAINED—I see that the Long Island Rail Road last week got an award for achievement in public relations. When this can happen, it just shows that no railroad should be discouraged by its lack of popularity. If ever there was a railroad in the dog-house with the public and the press, it was this one—and only a few years ago, too. Getting tax relief which made some money available for needed improvements—and continuous management effort to provide reliable service—were the foundation on which growing public approval has been built.



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In precise, scientific tests conducted by a prominent Chicago engineering firm, cotton wiping waste and wiping cloths were compared to determine their absorptive qualities. Samples were tested under identical, controlled conditions. The carefully tabulated figures prove once and for all that wiping waste absorbs 443% as much oil as the same amount of wiping cloth! The complete report of these tests has been prepared and is available free upon request. Use the convenient coupon below.

Actually these new tests only bear out old facts already known to most users of wiping waste. Wiping waste, consisting of all new, uniform threads, is by its very nature more consistently efficient. What's more, since good quality wiping waste can be purchased at a much lower initial cost per pound than proper quality wiping cloths, waste is considerably cheaper to use.

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INSTITUTE OF THREAD MACHINERS, INC.

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Institute of Thread Machiners, Inc.
84 Field Point Road
Greenwich, Connecticut
Dept. RA-2

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According to Mr. John L. Gillis, vice-president of marketing, Monsanto Chemical Company: "*Industrial advertising produces results when it puts into people's minds ideas which create a favorable attitude for salesmen to capitalize upon.*"

The specific effect of industrial advertising upon the market can seldom be measured alone.

Because: advertising is only one member of a marketing team which also includes product development, market research, sales control, field engineering and product performance — all reinforcing the work of the salesmen.

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MARKET OUTLOOK *at a glance*

Carloadings Rise 18.2% Above Previous Week's

Loadings of revenue freight in the week ended September 13 totaled 665,999 cars, the Association of American Railroads announced on September 18. This was an increase of 102,648 cars, or 18.2%, compared with the previous holiday week; a decrease of 75,148 cars, or 10.1%, compared with the corresponding week last year; and a decrease of 154,850 cars, or 18.9%, compared with the equivalent 1956 week.

Loadings of revenue freight for the week ended September 6 totaled 563,351 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, September 6

District	1958	1957	1956
Eastern	77,811	94,881	105,158
Allegheny	95,443	127,572	133,775
Pocahontas	45,612	54,535	53,295
Southern	98,365	107,354	109,906
Northwestern	92,124	106,757	111,140
Central Western	110,287	108,047	115,456
Southwestern	43,709	46,971	50,921
Total Western Districts	246,120	261,775	277,517
Total All Roads	563,351	646,117	679,651
Commodities:			
Grain and grain products	46,913	38,122	43,763
Livestock	6,629	7,467	10,495
Coal	98,250	119,229	121,407
Coke	6,441	9,711	11,140
Forest Products	34,679	34,220	38,664
Ore	50,722	81,925	71,450
Merchandise l.c.l.	44,542	47,306	52,540
Miscellaneous	275,175	308,137	330,192
September 6	563,351	646,117	679,651
August 30	645,432	745,620	784,366
August 23	633,687	759,240	770,413
August 16	625,991	750,640	769,644
August 9	618,580	740,471	715,207
Cumulative total 36 weeks	20,146,021	24,930,891	25,705,197

IN CANADA.—Latest carloading figures were not available as this issue went to press.

New Equipment

FREIGHT-TRAIN CARS

► *Repair Ratio Reaches 8%.*—Class I roads on August 1 owned 1,744,459 freight cars, 13,716 more than a year ago, according to AAR report summarized below. Repair ratio was 3.1% higher than on Aug. 1, 1957.

	Aug. 1, 1958	Aug. 1, 1957	Change
Car ownership	1,744,459	1,730,743	+13,716
Waiting repairs	140,286	85,396	+54,890
Repair ratio	8.0	4.9	+ 3.1%

New Facilities

► *Canadian National.*—Ordered equipment from General Railway Signal Company for installation of 114 miles of type K2 centralized traffic control between Boston Bar and Port Mann, B.C. From the sectional-type control machine in Kamloops, a 128-mile carrier link will transit the codes to a converter location at Boston Bar. Seventeen electric switch machines and 60 searchlight signals will be installed.

► *Northern Alberta.*—Bridge renewal program for 1958 includes reconstruction of 16 structures and elimination of a 17th, at a total cost of approximately $504,349. Contracts for 11 projects have been awarded to Dobson Brothers, Vancouver, B.C.; railroad forces will handle the remaining six jobs.

► *Tennessee Central.*—Building 1.5-mile track to connect two plants operated by Tennessee Chemical Products Corp. at Rockwood, Tenn. Project, costing approximately $55,000, is about 75% complete at present, will be finished by early fall.

Purchases & Inventories

► *Six Months' Purchases Down 43.63%.*—Purchases by domestic railroads of all types of materials in this year's first six months were $560,087,000, or 43.63%, lower than in the comparable 1957 period. Purchase and inventory estimates in following tables were prepared by Railway Age.

PURCHASES *	June 1958	Six Months 1958	Six Months 1957
	(000)	(000)	(000)
Equipment **	$ 55,652	$ 81,125	$ 315,365
Rail	6,187	26,369	62,757
Crossties	3,041	22,630	39,155
Other Material	60,967	420,441	624,223
Total from Manufacturers	$125,847	$550,565	$1,041,500
Fuel	25,610	173,177	242,329
Grand Total	$151,457	$723,742	$1,283,829

* Subject to revision.
** Estimated value of orders.

INVENTORIES * †	June 1, 1958	June 1, 1957
	(000)	(000)
Rail	$ 59,716	$ 62,009
Crossties	95,065	97,916
Other Material	468,946	551,07[illegible]
Scrap	24,750	22,956
Fuel	20,174	29,713
Total	$668,651	$763,668

* Subject to revision.
† All total inventory figures taken from ICC statement M-125 for month indicated

a RAILWAY AGE time-saver page

Rate Hike Must Precede Pay Hike

(Continued from page 24)

taken in that respect merely conceals the essential economic fact that the costs of providing that service must be paid by someone."

As for possible manpower cutbacks involved in rising wage costs, that's an unknown factor. But, Mr. Gordon pointed out, "it is perfectly evident what we are facing. With each freight rate increase we enlarged the area in which competition with railway services can be effectively provided. As we increase the price of railway service we invite other forms of transportation to provide a service at a price that will take the traffic."

Even if the proposed 19 per cent rate hike should be approved, however, it doesn't follow that the carriers will give automatic acceptance to the wage recommendation.

- Negotiations still must be completed with the operating crafts. While the non-op settlement frequently has set a pattern for agreement with the other unions, there's no guarantee that such will be the case this year.
- As outlined by Mr. Gordon, the first step must be to see whether the money for any raise can be obtained. "Then we will invite the unions in and we will have the majority award and minority report—both reports before us—and we will use those as the basis of arriving at a wage settlement."

C&NW, ORT Both File Appeals

Chicago & North Western's "job freeze" dispute with the Order of Railroad Telegraphers last week was on its way to a determination by an appellate court. And until that decision is handed down, there'll be no strike of the union's 1,600 members. (RA, Sept. 15, p. 10.)

Both the railroad and the union have filed appeals with the Seventh Circuit Court of Appeals. Union attorneys contended that Federal District Judge Joseph Sam Perry erred in his determination that a 30-day cooling-off period extended from a second withdrawal of the National Mediation Board from the dispute. Also, the union sought its appeal on the basis that Judge Perry was without jurisdiction to enjoin a strike.

North Western attorneys had attempted to establish six points with regard to the dispute, and based their appeal on the contention that Judge Perry had recognized only one of them—the point that the union can't strike until 30 days after all mediatory efforts, whether original or renewed, had ceased.

The road had termed the proposed strike a protest over actions of two state commissions in permitting C&NW to consolidate and rearrange station agencies. It had contended that the dispute should properly go to the National Railroad Adjustment Board, and that the "job freeze" rule rolling employment back to what it was on Dec. 3, 1957, wasn't a bargainable issue under the terms of the Railway Labor Act. Moreover, C&NW contended that while the case is pending before the Adjustment Board the union can't strike, and that the ORT—not North Western itself—had rejected offers to confer on basic issues involved.

Giant Dome Nearing Completion

Union Tank Car Company's Union Dome tank car repair and maintenance shop at Baton Rouge, La., is expected to be in full operation by mid-October. The main dome, 384-ft in diameter and 120-ft high at center, has no internal supports, provides complete flexibility in interior layout. The structure itself consists of 321 hexagonal steel panels welded together and strengthened by external supporting tension and compression members.

Investigators Probe Cause Of CNJ Commuter Wreck

Federal, state and railroad investigators today are seeking an answer to a tragic question: how could it happen, why did it happen, that a Jersey Central commuter train passed three signals, jolted through a derail onto the ties and plunged on through an open lift-bridge into the murky waters of Newark Bay.

Two diesel units and three coaches dived into the water at approximately 10:01 a.m. Sept. 15. Twenty-seven persons were killed, including the engineer. Some 16 are listed as missing, among them the fireman.

The ICC opened an investigation last Thursday in New York. The New Jersey Public Utilities Commission was scheduled to begin its probe Sept. 22 in Newark.

The accident occurred near the eastern end of a four-tracked, 1½-mile long bridge at a point where a twin-type vertical lift-bridge spans a deep-water navigation channel. The bridge, built in 1864 and rebuilt in 1927, crosses Newark Bay, linking Elizabeth, N. J., and Bayonne.

Reconstruction of the events leading up to the crash put the train past FH Tower, immediately west of the bridge, at 9:59 a.m. Four minutes earlier, the draw captain had raised the bridge to clear passage for a sand dredge.

Beyond the tower, the train faced three color light signals and an automatic derail before reaching the lift span. Operating rules permit a speed of 45 mph normally, half that speed when the bridge is open and approach signals show yellow.

As the train bore down on the open lift, it ran a red signal 559 ft west of the span. Fifty-five feet farther on, it hit an automatic derail. Then the two-unit diesel plunged forward into the bay, dragging along two coaches. A third car hung partly submerged on the edge of the bridge. Two other cars remained on the structure.

Preliminary investigation failed to make the accident cause any less a puzzle. An autopsy on the body of the engineer, it was reported, showed "hypertensive heart disease" as a contributory factor in his death. But, the railroad pointed out, no conclusive statement as to cause of death could be made until further tests are completed.

Thus far, CNJ said, there is "no clear evidence to indicate who or what failed."

Wilfred H. Holland
B&M

Foster R. Spofford
B&M

Thomas J. Lamphier
GN

Robert W. Minor
NYC

Emory F. Waldrop, Jr.
Seaboard

Elzo L. Van Dellen
WP

People in the News

AROOSTOOK VALLEY.—Philip G. Watts, district freight agent of the **Canadian Pacific** at Portland, Me., appointed general manager, Aroostook Valley, Presque Isle, Me., succeeding **G. Budd Hallett,** who retired August 1.

ATLANTIC COAST LINE.—H. A. Netsel and **J. S. Hatchell** appointed general agents at Fort Pierce, Fla., and Ft. Lauderdale, respectively.

BALTIMORE & OHIO.—J. D. Healey, division passenger agent, Cincinnati, Ohio, named general passenger agent, Chicago, with jurisdiction over Chicago and territory west thereof. **Robert B. Gray,** division passenger agent, Louisville, Ky., succeeds Mr. Healey.

Edwin H. Burgess, vice president and general counsel, Baltimore, retires September 30.

BOSTON & MAINE.—Wilfred H. Holland, assistant to vice president—operations, Boston, appointed assistant vice president—operations there.

Foster R. Spofford, assistant chief engineer, promoted to chief engineer.

CANADIAN NATIONAL.—D. W. Blair, regional chief engineer, Atlantic region, Moncton, N.B., appointed general superintendent, Maritime district, Moncton, succeeding **J. W. Demcoe,** transferred to the Southern Ontario district, Toronto. **R. P. Puddester,** regional engineer, maintenance of way, Moncton, succeeds Mr. Blair as chief engineer, Atlantic region.

H. L. McCagg, assistant mechanical engineer (diesel), Montreal, appointed mechanical engineer (diesel).

Robert P. Rennie, chief chemist, department of research and development, Montreal, appointed assistant controller of tests and materials research in that department, succeeding **A. T. G. Westbrook,** whose promotion to controller of tests and materials research was noted in RA, Aug. 4, p. 35.

E. T. Hardy, assistant superintendent, Montreal terminals, appointed superintendent, Montreal terminals.

Robert Lyall Steeves appointed master mechanic, Prince Edward Island division.

William G. Hinkel appointed general passenger agent, CNR-Grand Trunk, Chicago, succeeding **George D. Nugent,** who retired August 31.

David A. Foster, regional mechanical engineer, Moncton, N.B., appointed Maritime district superintendent of motive power and car equipment at that point, succeeding **W. H. Boulay,** who retired August 31.

Harold J. Schneider, general agent, Cincinnati, appointed general agent, Passenger Department, Minneapolis, to succeed **Reginald H. Newcombe,** transferred to New York.

GREAT NORTHERN.—Raymond J. Class, assistant general passenger agent, St. Paul, named general passenger agent, Seattle, succeeding **Neal D. Keller,** who has been transferred to St. Paul.

Donald F. Marston, mechanical assistant, St. Paul, appointed mechanical engineer there, to replace **William C. Miller,** who retired August 31.

Jacob H. Marthaler, superintendent of the employment bureau, St. Paul, retired August 31.

D. D. Dahl, assistant to the supervisor of engineering, Grand Forks, N.D., named director of specialized services, St. Paul, replacing **W. T. Sloan,** appointed trainmaster, Superior, Wis.

A. A. Ledegar, assistant general auditor, St. Paul, named assistant comptroller there, succeeding **H. J. Knaff,** who retired September 1. **V. C. Peterson,** assistant to comptroller, and **L. J. Kittley,** auditor of freight accounts, appointed assistant general auditors. **J. F. Arth,** assistant to auditor, named to succeed Mr. Kittley.

Thomas J. Lamphier, assistant to vice president—data coordination, St. Paul, appointed director of the newly created division of economic research there.

KANSAS, OKLAHOMA & GULF—MIDLAND VALLEY—OKLAHOMA CITY-ATOKA.—C. R. Johnson appointed general freight agent, Chicago, succeeding **S. O. Belcher,** transferred to Phoenix, Ariz.

KENTUCKY & INDIANA TERMINAL.—B. Y. Heazlitt, purchasing agent, Louisville, Ky., promoted to manager of purchases and stores. **G. E. Everson,** chief clerk to purchasing agent, promoted to assistant manager of purchases and stores. **R. H. Bruckert,** storekeeper, retired July 31.

MAINE CENTRAL.—Ansel N. Tupper, trainmaster, Waterville, Me., transferred to Portland, Me., succeeding **Rodney E. MacLearn,** resigned.

NEW YORK CENTRAL.—Robert W. Minor, whose resignation as a Commissioner of the Interstate Commerce Commission was announced September 4, has been appointed vice president—law, NYC, succeeding **Garrard W. Glenn,** resigned effective October 1 (RA, Sept. 15, p. 5).

Anthony A. Cicenas, assistant to assistant vice president at Cleveland, appointed coal sales manager, New York area, succeeding **Joseph D. Gunther** whose appointment as assistant vice president—freight sales and service at Boston was reported in RA, Aug. 18, p. 38.

William A. Marx appointed office engineer, Cleveland, succeeding **R. L. Teeter,** promoted.

NORTHERN PACIFIC.—Joseph L. Goss, chief chemist in the water service department, Missoula, Mont., named to the newly created position of supervisor of power and heating plants there.

PENNSYLVANIA.—John L. Hayes, assistant passenger manager, Pittsburgh region, appointed superintendent of passenger transportation, Philadelphia, succeeding **Robert L. Agnew,** who retired September 1.

D. A. Sempsrott appointed district engineer, Chicago.

ROCK ISLAND.—David R. Arnold appointed assistant to the president, Chicago. Mr. Arnold was formerly associated with the Gardner division of the Diamond Gardner Corporation, Middletown, Ohio.

W. P. Brown, general storekeeper, Silvis, Ill., named manager of stores there, to succeed **George F. Jung,** who retired August 31. **W. L. Garrett,** assistant general storekeeper, Silvis, replaces Mr. Brown.

H. G. Dennis, assistant engineer, maintenance of way, Chicago, named engineer, maintenance of way there, succeeding **J. T. Fitzgerald,** who retired August 31.

SANTA FE.—Effective September 1, the Western division abolished and the Middle division, Eastern Lines, extended to include all districts of the Western division, with division office at Newton, Kan., under **J. P. Spears,** superintendent. Western division first and second districts designated second and fifth districts respectively of the Middle division. Middle division second district designated fourth district.

F. L. Elterman appointed superintendent of terminals, Eastern lines, Topeka, Kan.

SEABOARD.—Emory F. Waldrop, Jr., assistant general passenger traffic manager, Norfolk, appointed assistant to president, assigned specifically to collaboration with the offices of C. E. Bell, who is vice president—public relations.

J. W. Thompson, acting general superintendent, appointed general superintendent, Jacksonville, Fla., succeeding **R. M. Stone,** retired because of illness.

H. S. Coltrain, district freight and passenger agent, Lake Wales Fla., promoted to express traffic manager, Richmond, succeeding **O. W. Hall,** whose promotion to assistant freight traffic manager was noted in RA, Sept. 8, p. 78.

F. B. Phelps, assistant freight traffic manager: **J. C. Warren,** general freight agent, and **C. Y. Shafer,** assistant general freight agent, retired. **W. B. Culpeper,** general freight agent, and **J. A. Wilson,** assistant general freight agent, promoted to assistant freight traffic managers. **H. W. Ewell** and **B. L. Oden'hal, Jr.,** assistant general freight agents, named general freight agents. **I. G. Brooks, C. B. Corey** and **S. E. Harrison** appointed assistant general freight agents. All will have headquarters at Richmond.

SEATRAIN LINES.—Joseph Hodgson, Jr., promoted to assistant general freight traffic manager.

Harry F. Hall named manager of Seamobile engineering and maintenance. **H. T. Haller** appointed manager of marine engineering and maintenance. Mr. Hall was formerly chief engineer for the Youngstown Steel Car Company.

SOUTHERN PACIFIC.—Arvin F. Green, office engineer-signal, San Francisco, retired August 31.

TEXAS & PACIFIC.—G. W. Stone, assistant superintendent, Baird sub-division, Big Spring, Tex., transferred to the Eastern division, Fort Worth,

Saves $5,000 washing diesels

So called "economy" cleaning compounds for washing diesels cost one terminal 80 cents per unit, for a total cost of $9600 yearly. A switch to Oakite materials shoved costs down to 31 cents per unit, for savings estimated at $5000 a year. Reason: Oakite materials not only permitted *more dilute solutions but* also gave a perfect job with *less gallonage* per unit.

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replacing **R. G. Brill,** resigned. Mr. Stone's successor is **C. S. Baldwin,** assistant superintendent, Toyah sub-division, including Big Spring Yard, Big Spring, who in turn is replaced by **C. Percy, Jr.,** trainmaster, Western division, Big Spring. **K. E. Banks,** trainmaster, Louisiana division, Alexandria, La., named to replace Mr. Percy. **R. E. Gray,** trainmaster, Louisiana division, assigned headquarters at Alexandria, to succeed Mr. Banks. **J. E. Shipp,** road foreman of engines, Eastern division, Mineola, Tex., appointed trainmaster, Louisiana division, Shreveport, to replace Mr. Gray.

TEXAS CITY TERMINAL.—**J. B. Wimberly** appointed president and general manager, Texas City, Tex., effective July 29, to succeed **W. P. Ludwig, Jr.,** resigned.

VIRGINIAN.—**F. S. Yancey,** chief clerk to superintendent motive power, Princeton, W. Va., appointed assistant personnel manager, Norfolk, Va.

G. M. Cornell appointed chief engineer, Norfolk, succeeding **L. A. Gillett,** who retired September 1. Abolished position of assistant to president, formerly held by Mr. Cornell and personnel matters previously under his jurisdiction will be handled by the personnel manager.

WABASH.—**Edward W. Nappier** appointed division freight agent, Springfield, Ill., to succeed **J. F. Crinigan,** who retired September 1.

L. B. Yarbrough, assistant superintendent signals and communications, Decatur, Ill., promoted to superintendent signals and communications there, succeeding **G. A. Rodger,** retired.

WESTERN MARYLAND.—**Charles J. Wolfe,** assistant vice president operations—mechanical, Baltimore, Md., retired August 31.

WESTERN PACIFIC.—**Charles W. Dooling** elected vice-president—consultant.

Elzo L. Van Dellen, general attorney, San Francisco, appointed general counsel.

OBITUARY

James J. Coakley, 52, signal engineer, **Jersey Central,** Jersey City, N.J., died September 14 at the Alexian Brothers Hospital, Elizabeth, N.J., after a long illness.

M. R. Garrison, 69, who retired in 1954 as general freight traffic manager of the **New York Central System** at New York, died September 10 in Englewood (N.J.) Hospital.

Theodore R. Gillespie, 49, general supervisor of the **Western Weighing & Inspection Bureau,** died September 11.

David S. Thomson, 62, vice president, **Canadian Pacific,** Montreal, died September 16.

Supply Trade

Robert H. Beetle, assistant chief engineer, has been appointed chief engineer for Southern Wheel Products of the Railroad Products Division, **American Brake Shoe Company,** New York, succeeding **Robert A. Gow** retired. **George Thomas Butcher** has been appointed product manager of Bearing Products, Railroad Products Division, New York, succeeding **Harry E. Connors,** retired.

Hewitt-Robins, Inc. has announced the appointment of **Beck & Blatchford, Inc.,** Chicago, as transportation industry sales agents for Hewitt-Robins latex foam rubber and urethane foam products.

George F. Manikas has been appointed general manager of the **Crosby-Laughlin Division** of **American Hoist & Derrick Company,** at Fort Wayne, Ind. Mr. Manikas was formerly eastern district manager in charge of East Coast sales and the warehousing operation at South Kearny, N.J.

T. W. Baldwin, representative for the **Air Brake Division** of **Westinghouse Air Brake Company** in charge of the St. Paul, Minn. office, retired August 1. His successor is **W. W. Wagner,** transferred from the Chicago office.

Pyle-National Company, Chicago, has contracted to acquire the **Steber Manufacturing Company,** Broadview, Ill., a major producer of outdoor lighting fixtures and lighting equipment. The Steber company will continue its operations as a division of Pyle-National. **Clarence L. Steber,** president of Steber Manufacturing, will continue as president of the Steber Division and will be a vice president and director of Pyle-National.

Beyer Peacock (Hymek) Ltd. has been formed to unite the resources of Beyer Peacock, Armstrong Siddeley, and the Brush Group for the design and construction of diesel-mechanical and diesel-hydraulic locomotives. The new company is located at Locomotive House, Buckingham Gate, London SW1, England. The manufacture of the locomotives, however, will normally be undertaken by Beyer Peacock at its works at Manchester, England.

J. W. Miller has been appointed assistant vice president in the Birmingham, Ala., sales office of **Pullman-Standard Car Manufacturing Company.**

W. H. Ripken, district manager at New York for **Fairmont Railway Motors, Inc.,** has been appointed export manager at Fairmont, Minn., to assist **W.D. Brooks,** vice president—export. **W.W. Welchlin** has been appointed assistant export manager. **Fred A. Kaup** succeds Mr. Ripken as district manager at New York.

Thomas W. Pettus, executive vice president, appointed president of **Scullin Steel Company,** division of Universal Marion Corporation, at St. Louis.

Palmer Bayer, assistant to the president, **Rail-Trailer Company,** has been elected vice president and treasurer and a director.

Thrall Car Manufacturing Company has purchased **Western Railway Equipment Company** and **Railway Devices Company.** Main offices of the two firms will be consolidated and relocated in the Railway Exchange Building, St. Louis.

Robert E. Coughlan, formerly associated with **Miller Lubricator Company,** has been appointed director of sales for the **Albert Manufacturing Company,** Hammond, Ind. in the sale of their new lubricator pad and seals. The new pad will be handled through the **Marquette Railway Supply Company** of Chicago.

The Boston branch of **Exide Industrial Division, Electric Storage Battery Company** has moved into a new building at 315 Mystic Avenue, in suburban Medford, Mass. **James G. Bouska,** assistant branch sales manager in San Francisco, has been appointed sales manager in Los Angeles.

Harold Harris has been promoted to assistant to president, **Enterprise Railway Equipment Company,** 59 East Van Buren Street, Chicago 5. **Clarence J. Koranda,** sales engineer, appointed assistant to vice president—sales.

Victor J. M. De Blieck has been appointed resident manager in Europe for **General Railway Signal Company.**

Don W. Sheedy has been appointed traffic manager and **Ted Burmeister** named parts manager in the Danville, Ill. plant of **Hyster Company.**

Robert G. Koob, district service manager, **ALCO Products, Inc.,** New York, has been named transportation products sales representative there, to succeed **James L. Layton,** transferred to Los Angeles. **T. E. Fryar,** assistant renewal parts

manager, Los Angeles, has been appointed renewal parts and warehouse manager there.

Zambry P. Giddens has been appointed assistant to president of **Servo Corporation of America** and vice president in charge of its railroad products subsidiary, **Servo Electronic Switch & Signal Company.** Mr. Giddens, who had been serving as a consultant to Servo while on temporary leave from Ira Haupt & Company, will be responsible for all marketing activities connected with railroad products.

K W Battery Company, Skokie, Ill., has announced the appointment of **Southland Battery Company,** Dallas, Tex., as exclusive sales representative for the states of Texas and Oklahoma.

David L. Keith has been named a vice-president of **H. M. Byllesby & Company,** Chicago, investment banking and brokerage firm.

H. M. Nelson has been appointed assistant vice-president, maintenance, **North American Car Corporation,** Chicago. He was formerly general mechanical superintendent for **Fruit Growers Express-Western Fruit Express-Burlington Refrigerator Express Company,** Washington, D. C.

Robert E. Waller has been elected vice president and treasurer, **Spring Packing Corporation,** Chicago.

J. B. Gardner has been appointed assistant chief engineer of the **Kerite Company,** to fill the vacancy left early this year by promotion of **Ralph B. Norton** to chief engineer.

E. L. Essley Machinery Company, Chicago, has been appointed mid-central area sales representative for Niles industrial and railroad machine tools made by Hamilton (Ohio) division of **Baldwin-Lima-Hamilton Corporation.** The Essley territory includes northern Illinois, Iowa, Wisconsin, western Michigan and northern Indiana.

Henry V. Bootes, executive vice president, **Shippers' Car Line** division of **ACF Industries,** has been appointed president of the division, succeeding **Harry J. Leddy,** retired.

George O. Whitesell has joined **Chromium Corporation of America,** Cleveland, Ohio, as sales and service engineer at Atlanta, Ga. His activities will center about the railroad industry in the southeastern and eastern portions of the United States. Mr. Whitesell was formerly with Oakite Products and the Seaboard Air Line.

August A. Rossetti has been elected vice president (operations) and **Maurice E. Costello,** assistant vice president (sales) of **McConway & Torley Corporation.**

Newton R. Crum has been appointed manager of the Los Angeles office of the **Lunkenheimer Company. J. Paul Scherer** has been named a sales representative and assigned to the New York office. The Boston sales office and warehouse have been relocated at 313 Mystic Avenue, Medford, Mass.

All in One Piece—121 Feet of Tank

Receiving the largest propane storage tank ever shipped in one piece at Keswick, Va., are, left to right, D. L. O'Connor, freight traffic manager—sales for the Chesapeake & Ohio; C. V. Cowan, eastern region manager for the C&O, and E. Otto N. Williams, president of the Bottled Gas Corporation of Virginia. The 74,000-gallon tank, built by American Car & Foundry Division of ACF Industries at Milton, Pa., was transported to the gas company's plant on three specially rigged flatcars. The tank weighs 85 tons, is 121 feet long.

J. E. Drennon, assistant district manager, **Primary Battery Division, Thomas A. Edison Industries** of **McGraw-Edison Company,** at St. Louis, has been named district manager there, succeeding **O. P. Rose,** retired. **A. W. Frank,** assistant district manager, Bloomfield, N.J., appointed district manager there. **R. J. Doyle** and **J. R. Long,** application engineers, named district managers at Chicago.

Griffin Wheel Company has announced the start of regular operations at their new EQS cast steel wheel plant at Muncie, Kan.

Harry E. Schneider, manufacturing manager of Plant Two of **Electro-Motive Division** of **General Motors Corporation,** Chicago, has been appointed manager, succeeding **Edgar W. Lister,** who retired August 31.

Thomas R. Charlton has been appointed regional manager, Railway Sales Department, **Shell Oil Company,** Chicago, replacing **L. L. Butcher,** retired.

OBITUARY

P. Ralph Mark, 75, retired executive vice president and vice chairman of the board of directors of **Crane Company,** died September 14 in his home at Chicago.

Newton C. Swigart, 42, vice president in charge of purchasing and traffic, **Whiting Corporation,** died September 11.

Dividends Declared

BANGOR & AROOSTOOK.—60¢, quarterly, payable September 30 to holders of record September 19.

BEECH CREEK.—50¢, quarterly, payable October 1 to holders of record September 15.

BESSEMER & LAKE ERIE.—$1.50 preferred, 75¢, semiannual, payable October 1 to holders of record September 15.

CHESAPEAKE & OHIO.—common, $1, quarterly, paid September 20 to holders of record September 2; 3½% convertible preferred, 87½¢, payable November 1 to holders of record October 7.

DELAWARE & BOUND BROOK.—50¢, quarterly, paid August 20 to holders of record August 13.

DELAWARE & HUDSON.—50¢, quarterly, payable September 27 to holders of record September 11.

DENVER & RIO GRANDE WESTERN.—62½¢, from net income for 1957, paid September 15 to holders of record September 5.

ILLINOIS CENTRAL.—50¢, quarterly, payable October 1 to holders of record September 2.

KANSAS CITY SOUTHERN.—common, $1, quarterly, paid September 15 to holders of record August 29; 4% preferred, 50¢, quarterly, payable October 15 to holders of record September 30.

KALAMAZOO, ALLEGAN & GRAND RAPIDS.—$2.90, semiannual, payable October 1 to holders of record September 15.

MAHONING COAL.—$5, payable October 1 to holders of record September 25.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—50¢, semiannual, payable October 30 to holders of record October 16.

PIEDMONT & NORTHERN.—$1.25, quarterly, payable October 20 to holders of record October 6.

PITTSBURGH & LAKE ERIE.—$1, irregular, payable October 15 to holders of record October 6.

SEABOARD AIR LINE.—50¢, quarterly, payable September 26 to holders of record September 15.

SOUTHERN.—Mobile & Ohio stock trust, $2, semiannual, payable October 1 to holders of record September 15.

SOUTHERN PACIFIC.—75¢, quarterly, payable September 22 to holders of record September 2.

UNION PACIFIC.—common, 20¢, quarterly; 4% preferred, 20¢, semiannual, both payable October 1 to holders of record September 8.

WESTERN MARYLAND.—common, 75¢, quarterly; 4% preferred, $1, quarterly; 5% preferred, 37½¢, quarterly; 7% preferred, $1.75, quarterly, all payable September 26 to holders of record September 19.

Henry V. Bootes

Zambry P. Giddens

Thomas R. Charlton

You Ought To Know...

The Virginian is seeking ICC approval of a plan under which $32,148,250 in new 6 per cent subordinated income sinking fund debentures would be offered in exchange for 2,795,500 cumulative preferred 6 per cent shares, $10 par value. Under the offer, holders of the preferred could exchange for the new debentures due Aug. 1, 2008 at the rate of $11.50 debentures for each $10 par value offered. The new debentures would be optionally redeemable in the eleventh year at prices starting at 115.

Industrial traffic management will be featured on a nationwide radio program over nearly 200 NBC stations at 6:05 p. m., E.D.T., on Sept. 28. The program is timed to tie in with the annual meeting of the Associated Traffic Clubs of America which begins in San Francisco that day.

Great Northern's outlook for 1958 as a whole is optimistic despite earnings below last year's in the first eight months. President John M. Budd has told his shareholders that the road will end up the year with a substantial net. Reasons: exceptional crop yields, "prudent trimming of expenses." Operating revenues in August were $25.3 million against July's $21.5 million. Revenues in August a year ago were $27.9 million. Net in August this year: $5.4 million; last year it was $4.5 million.

More than 1,500 persons from the U.S., Canada, and Mexico are expected to attend the 35th annual convention of the Associated Traffic Clubs of America in San Francisco, Sept. 28-Oct. 1. About 240 traffic clubs, with over 50,000 members, are affiliated with ATC.

Intercity truck freight volume during the second quarter of 1958 dropped 2.6 per cent below the same period of 1957, and 4.4 per cent below the corresponding 1956 period, according to the American Trucking Associations.

Railway Express operations are reported under "hard scrutiny" by Pennsylvania and New York Central (which together own some 26% of REA stock). Several alternatives to the present costly service are under study. One railroad officer's comment: "It's a very reasonable bet something will be done. The pressure is on to move as fast as we can." Among the rumored alternative plans: turn the business over to a forwarder.

Chicago & North Western continues to plow the financial benefits of improved efficiency back into property improvements. Latest beneficiary: the M/W department. Original plans called for installation of 500,000 new ties this year. Now the road has boosted its program by 28 per cent, or 140,000 additional ties.

Trainmen in local freight service staged a brief work stoppage on the Boston & Maine last week over alleged unsatisfactory conditions in cabooses. B&M said the dispute was part of a case currently in mediation. Effects of the walkout, the railroad said, were spotty—some local freights operated, some didn't.

Achievement award for outstanding public relations has gone to the Long Island. Public Relations News, which established the awards in 1950, notes this is the first railroad to win one. Ten other major companies are being cited this year. Basis of LI's award was the road's continuing "creative work in humanizing the road and its efforts to merit the reputation of a good business citizen."

ACF Industries looks for the railroads to make important contributions to the company's future sales and profits. ACF itself, Chairman William T. Taylor declared (at the annual stockholders meeting) will continue with "constructive diversification, but, consistent with our faith in the future of the railroads, we will maintain facilities that will enable us to hold and improve our position in the railroad equipment industry."

Class I railroad employment in mid-August stood at 844,394—an increase of 0.82 per cent over July. The August 1958 figure, however, was down 16.11 per cent from the corresponding 1957 figure, according to the ICC's Bureau of Transport Economics and Statistics.

A solution may be in sight for one of the railroad industry's more perplexing problems—the exchange of car movement information by means of a compatible format on Teletype tape or punch cards. A meeting in Atlanta, Ga., on Oct. 16 will brief 12 southern lines on a system already agreed upon by 15 eastern and southern lines. A Systems and Procedures Coordination Committee of southeastern roads and an ERPC subcommittee are both at work on the interchange data problem.

Over $4 billion has been authorized by the 85th Congress for improvements to air, water and highway transportation facilities, Caleb R. Megee, vice chairman of the AAR's Car Service Division, told the Ohio Valley Transportation Advisory Board last week. This kind of government spending endangers continued operation of the railroads as a private enterprise, Mr. Megee warned.

"Clearer skies ahead" is the prediction of Erie Executive Vice President Milton G. McInnes. He told the Marion (Ohio) Rotary Club that "the regulatory and competitive climate under which we must operate is showing signs of improving," although he cautioned against expecting any quick changes.

"Partnership in progress" is the theme of a new series of AAR ads appearing in national news and business magazines. Idea behind the series, says an AAR spokesman, is to show readers the inseparability of railroads and progress. Theme of the first ad: "America's atoms-for-peace program moves ahead on rails of steel."

A new investigation lies ahead for the railroad passenger business. This one will be handled by a special committee of the New York Criminal and Civil Courts Bar Association. Despite its New York origin, first indications are that the study will range far beyond local conditions.

A possible inland route from the port of New York to the St. Lawrence Seaway will be explored by an Army Corps of Engineers survey to begin this year, according to Rep. Francis E. Dorn of New York. The Army engineers will study the possibility of dredging existing water links from Albany into Lake Champlain and ultimately to the St. Lawrence.

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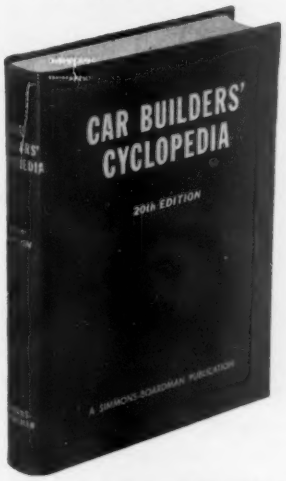

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Make No Small Plans!

If Congress had included everything the railroads asked for—in the recently enacted Transportation Act of 1958—the industry would still fall far short of holding first class economic citizenship in a regime of free enterprise.

If the railroads do not re-establish their rights to equality—similar to that enjoyed by other corporate industry—before the St. Lawrence Seaway and the new interstate superhighway system are in full operation, then socialization will stare them right in the face.

Two courses of action are urgent: (1) Vigorous use by the railroads of all the liberty the new law allows them, in an endeavor to improve their situation, and (2) carefully formulating and publicizing the further minimum legislative program necessary fully to restore railroad credit and growth potential.

Time and again the railroads have been overmodest in outlining the conditions required to give railroad transportation the same opportunity to attract customers, and to grow, that highway, air and inland waterway transportation have. The railroads have laid special emphasis on asking for "adequate user charges" from beneficiaries of government-provided transportation plant. But this is like one leg of a pair of pants—useless without the other leg. In addition to compensatory user charges, there should be a twin requirement, viz.: A showing that any sum to be spent for waterways or air transport or highways will—

(a) earn interest, property taxes, amortization and maintenance; and

(b) be at least as profitable as a similar capital sum spent otherwise for transportation.

The railroads are being squeezed to death by the socialistic activities of the government agencies that build transportation plant. The facilities that these government agencies provide are tax-exempt, and user charges either are absent or pitifully meager. But this isn't the half of it—these agencies get their billions without any objective proof that their expenditures are economically sound.

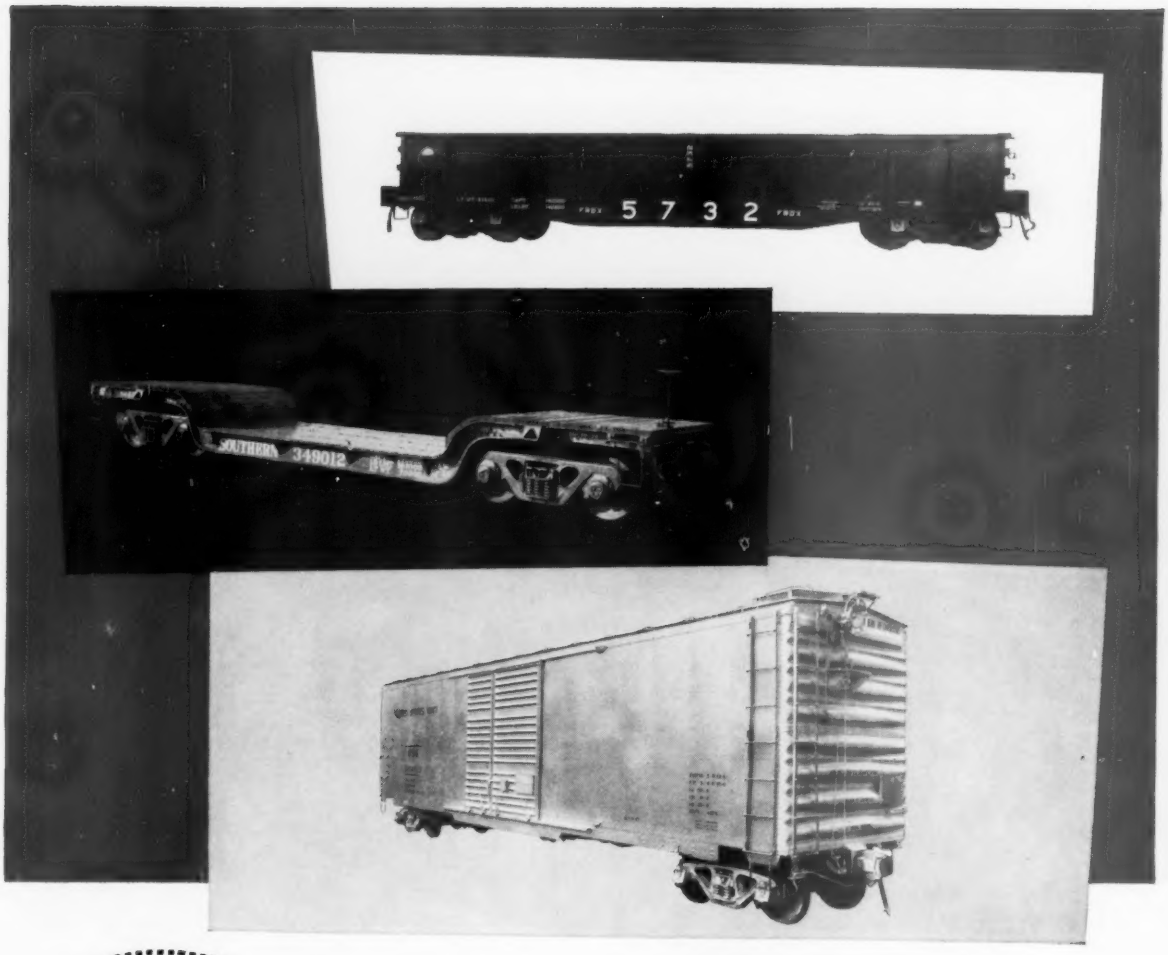
There are state and local agencies and "authorities" that are also deeply involved in parallel kinds of transportation socialism.

If the railroads are going to be restored to economic health under private financing, then proposed public transportation expenditures should be subjected to the same hard-headed scrutiny that railroads would have to undergo from financiers—if they sought to borrow $10 billion for improvements to railroad plant.

Either you put this government transportation plant on a strictly capitalistic basis, exactly as if it were a public utility in private ownership—or, one of these days, and soon, railroad capital expenditures will also have to be financed out of the public treasury. Unpalatable or not, this is the truth. Everybody who knows anything about transportation knows it is the truth.

Meantime, the railroads must exert themselves conspicuously to "do the best they can with what they've got." For example: The railroads seem to be moving forward with considerable vigor in the modernization of their freight rates. They are going ahead energetically to cut the dead wood out of their passenger service. But—are they showing the same zeal in promoting that part of passenger service with growth potential? Just what plans are afoot for persuading the railway unions to abandon "make work" rules?

WHAT IS YOUR PRESCRIPTION? We believe the foregoing outline embraces the main points of a program which would really restore transportation to free enterprise, and make it possible for the railroads, once more, to grow and prosper. If you do not agree, please tell us what items you would remove from, or add to, such a program. There is no other question to which you, as a railroad man, can more appropriately devote your thinking and your skill in "communication."



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